

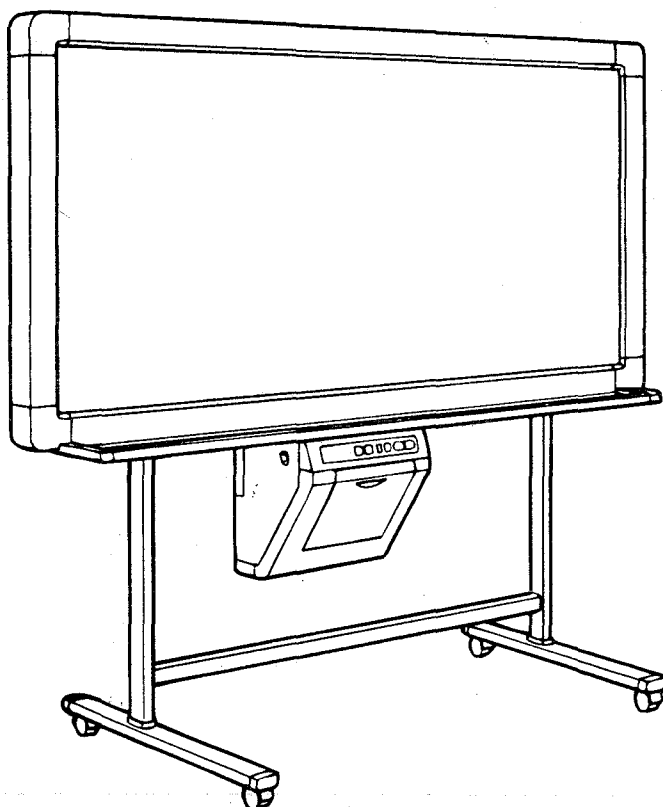
# Service Manual

Panaboard  
Electronic Print Board

**KX-BP535**

**KX-BP635**

**KX-BP735**



Above is KX-BP535. Stand is optional.

This is the Service Manual  
for the following areas.

No suffix for U.S.A.

- |    |                       |
|----|-----------------------|
| C  | ...for Canada         |
| U  | ...for U.K.           |
| G  | ...for Germany        |
| A  | ...for Australia      |
| GJ | ...for Southeast Asia |
| T  | ...for Taiwan         |

## **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# Panasonic

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## SECTION 1 GENERAL PRECAUTIONS

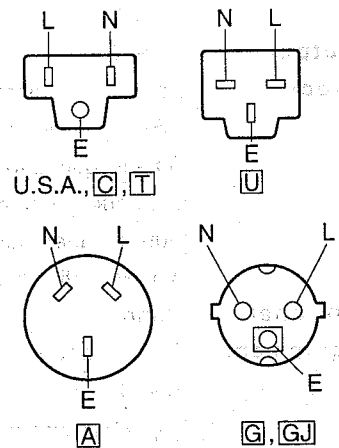
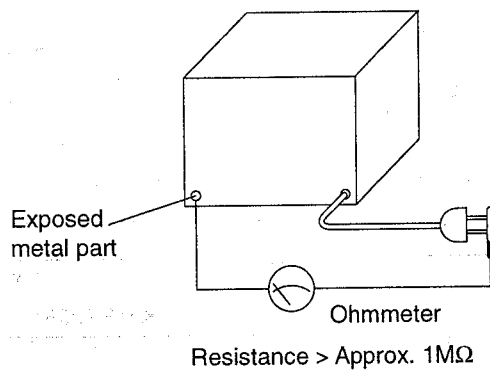
### 1.1 Safety Precautions

- 1) Before servicing, unplug the power cord to prevent electrical shock.
- 2) When replacing parts, use only manufacturer's recommended components for safety.
- 3) Check the condition of the power cord. Replace if wear or damage is evident.
- 4) After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
- 5) Before returning the serviced equipment to the customer, perform the following insulation resistance tests to prevent a shock hazard.

### 1.2 Insulation Resistance Test

- 1) Unplug the power cord and check for continuity between earth ground connection on the plug and the metal cabinet. There should be zero ohm resistance found.
  - 2) With the unit unplugged, short the AC Live-Neutral of the plug with a jumper wire.
  - 3) Turn on the power switch.
  - 4) Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads, etc.
- Note:** Some exposed parts may be isolated from the chassis by design. These will read infinity.
- 5) If the measurement is less than the lower limit (approx.  $1\text{M}\Omega$ ), there is a possibility of a shock hazard.

**Note:** This condition must be corrected before the device is left with the end-user.



### 1.3 For Service Technicians

ICs and LSIs are vulnerable to static electricity.

When repairing, the following precautions will help to prevent recurring malfunctions.

- 1) Cover the plastic parts with aluminum foil.
- 2) Ground the soldering irons.
- 3) Use a conductive mat on the work-table.
- 4) Do not grasp IC or LSI pins with bare fingers.

## SECTION 2

### SPECIFICATIONS

#### 2.1 Specifications

	Model No.			KX-BP535	KX-BP635	KX-BP735
General	Power Supply			AC 220 - 240V, 50 / 60Hz <sup>1</sup> AC 100 - 120V, 50 / 60Hz		
	Power Consumption(Operational/Standby)			0.8A/0.1A <sup>1</sup> 2.2A/0.1A		
	External Demensions Height x Width x Depth(mm)	Without stand		1,400 x 1,550 x 240	1,400 x 1,912 x 240	1,400 x 1,645 x 240
		With stand	KX-B061-A	1,875 x 1,550 x 1,100	1,875 x 1,912 x 1,100	1,875 x 1,645 x 1,100
			KX-B061M-A	1,875 x 1,550 x 591	1,875 x 1,912 x 591	1,875 x 1,645 x 591
	Weight(without stand)			34.0kg (35.5kg) <sup>2</sup>	36.5kg (38.0kg) <sup>2</sup>	38.5kg
	Ambient Operating conditions			Temperature : 10 - 35°C(50 - 95°F), Humidity : 30 - 80%		
Writing Implements			Dry erase felt-ripped markers(black, red and blue)			
Input Block	Panel Dimensions (Height x Width(mm))			900 x 1,400	900 x 1,762	900 x 1,400
	Panel Surfaces			2(endless type)		4(endless type)
	Panel Advance System			Scroll Type		
	Copying Area (Height x Width(mm))			850 x 1,330	850 x 1,680	850 x 1,330
	Scanning System			CCD flat-scan type		
Output Block	Printing System			Fusion thermal transfer type		
	Copy Paper			Standard or recycled paper(60 - 90g/m²)		
	Copy Paper Size(mm)			A4(210 x 297mm) / Letter(216 x 279 mm) <sup>3</sup>		
	Copy Density			8 dots/mm		
	Copy Colour			Black		
	Contrast Adjustment			Two levels : Normal / Dark		
	2-Screen Compressed Copying			Yes		No
	Time Required for Copying			15 sec / sheet		
	Continuous copies			1 to 9 sheets		
	Out-of-Paper Indication			Yes		
Optional Equipment	Wall-Mounting Kit			KX-B063		
	Stand			KX-B061-A / KX-B061M-A		
	PC Interface Kit			KX-BP095 <sup>4</sup> / KX-BP095U(for connection to PC)		
	Ruler Kit			KX-B05		
Separately Available	Replacement film			: KX-BP081(contains two 100 m rolls) KX-BP082(contains 100 m roll and film cassette)		
	Markers			: KX-B031(set of 10 black markers), KX-B032 (set of 10 red markers) KX-B033(set of 10 blue markers)		
	Erasers			: KX-B042(set of 6 erasers)		
	Marker and eraser set			: KX-B035(contains one black, one red, and one blue marker, and one eraser)		

<sup>1</sup> Applies to the KX-BP535U/G/A/GJ, KX-BP635U/G/A/GJ, KX-BP735U/G/A/GJ.

<sup>2</sup> Applies to the KX-BP535C, KX-BP635C, KX-BP735C.

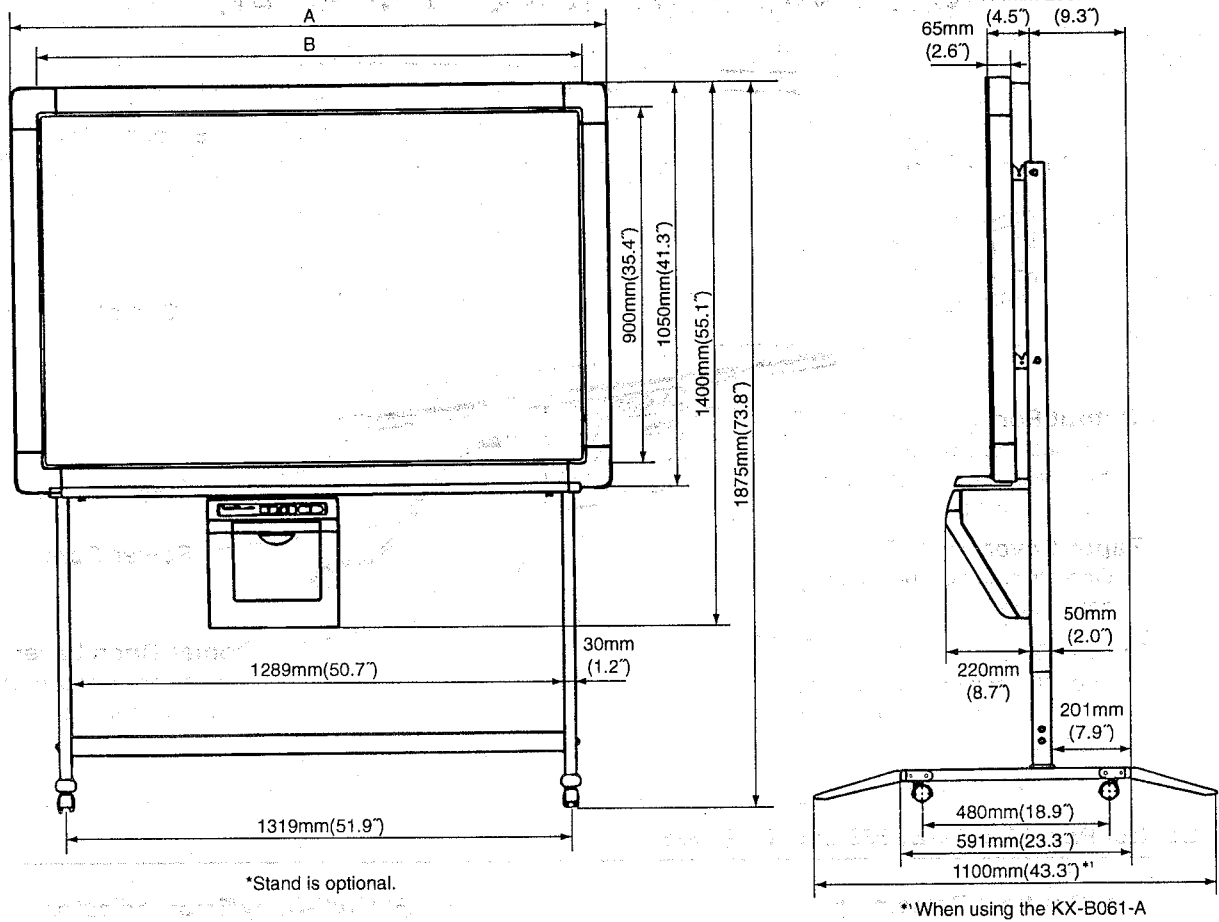
<sup>3</sup> Applies to the KX-BP535/C, KX-BP635/C, KX-BP735/C.

<sup>4</sup> Applies to the KX-BP535, KX-BP635, KX-BP735.

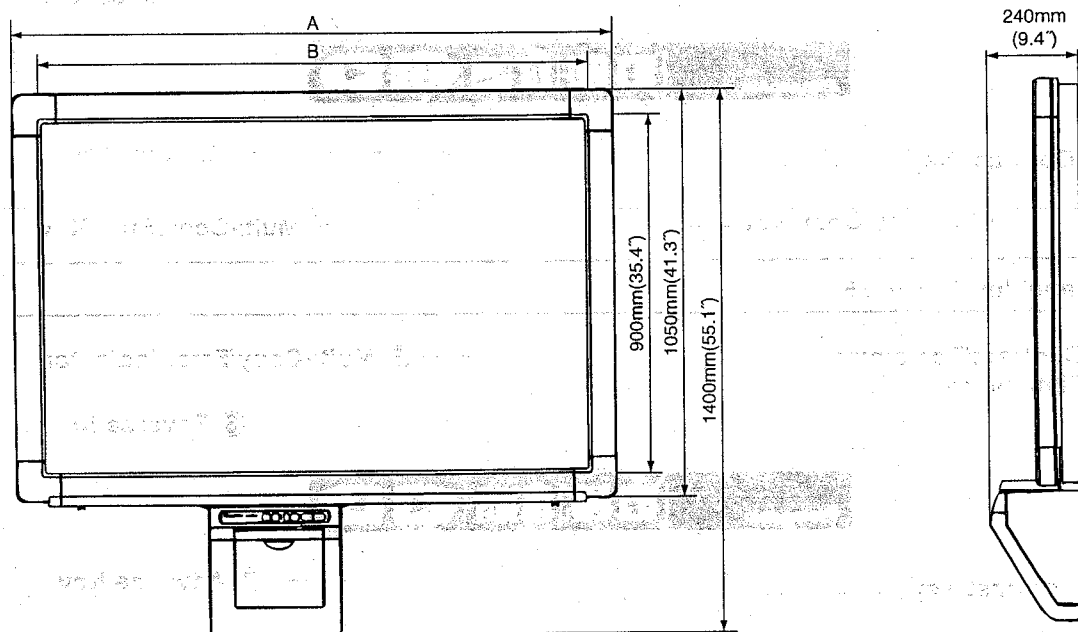


## 2.2 Exterior Dimensions

### Optional Stand Kit

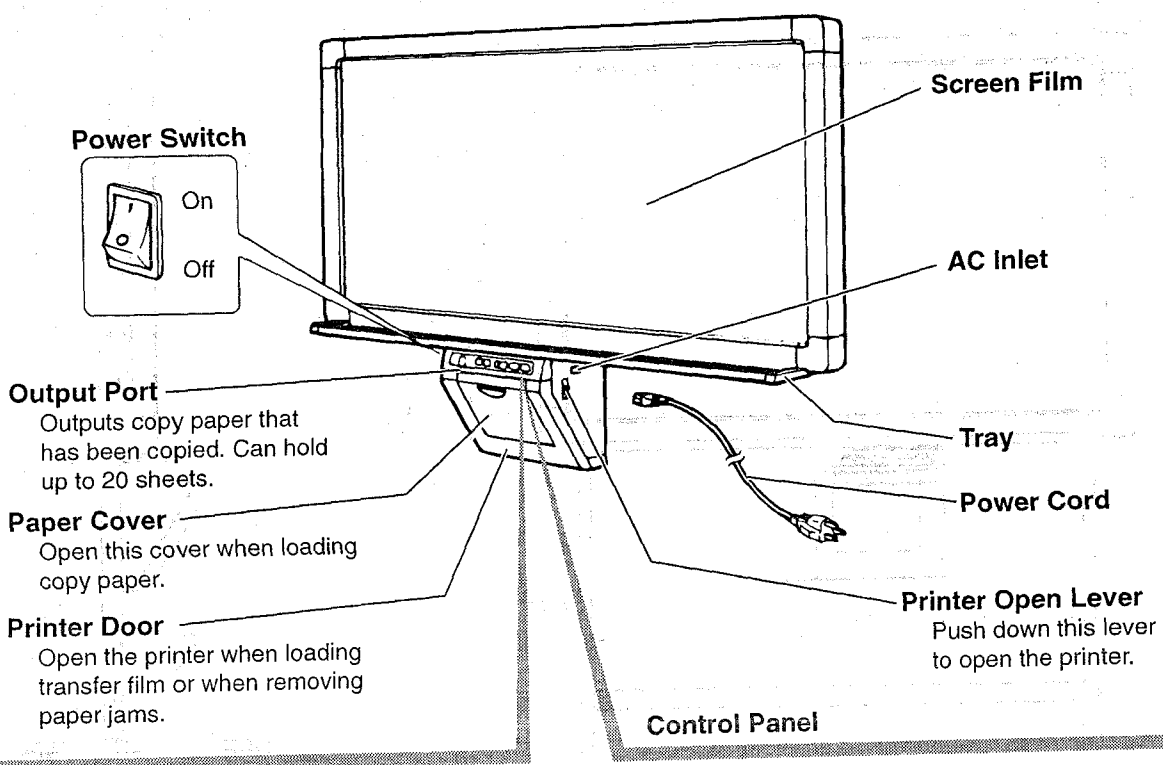


### Wall Mounting Kit

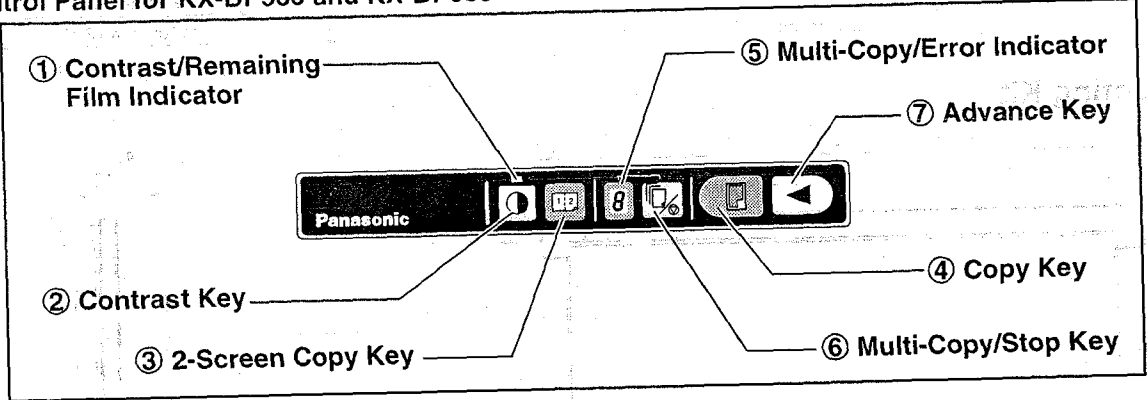


	A	B
KX-BP535	1550mm (61.0")	1400mm (55.1")
KX-BP635	1912mm (75.3")	1762mm (69.4")
KX-BP735	1645mm (64.8")	1400mm (55.1")

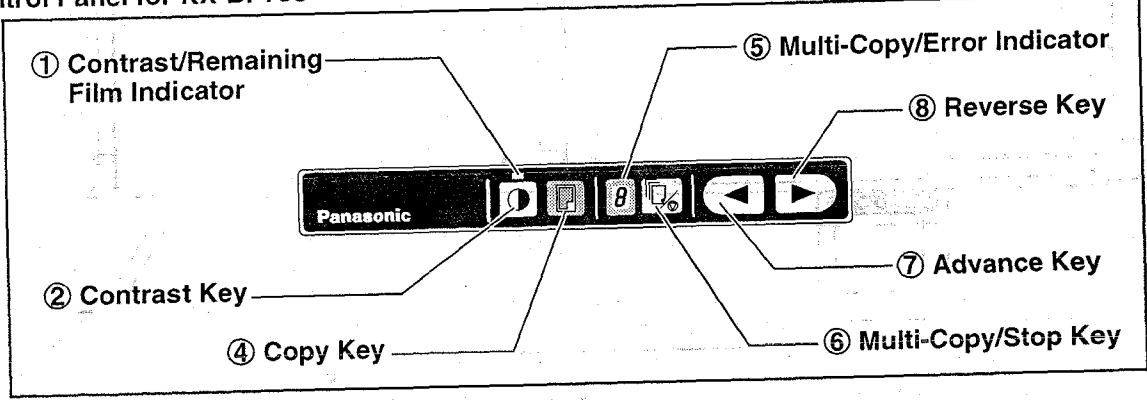
SECTION 3  
NAME AND FUNCTION OF EACH PART













Control Panel for KX-BP535 and KX-BP635



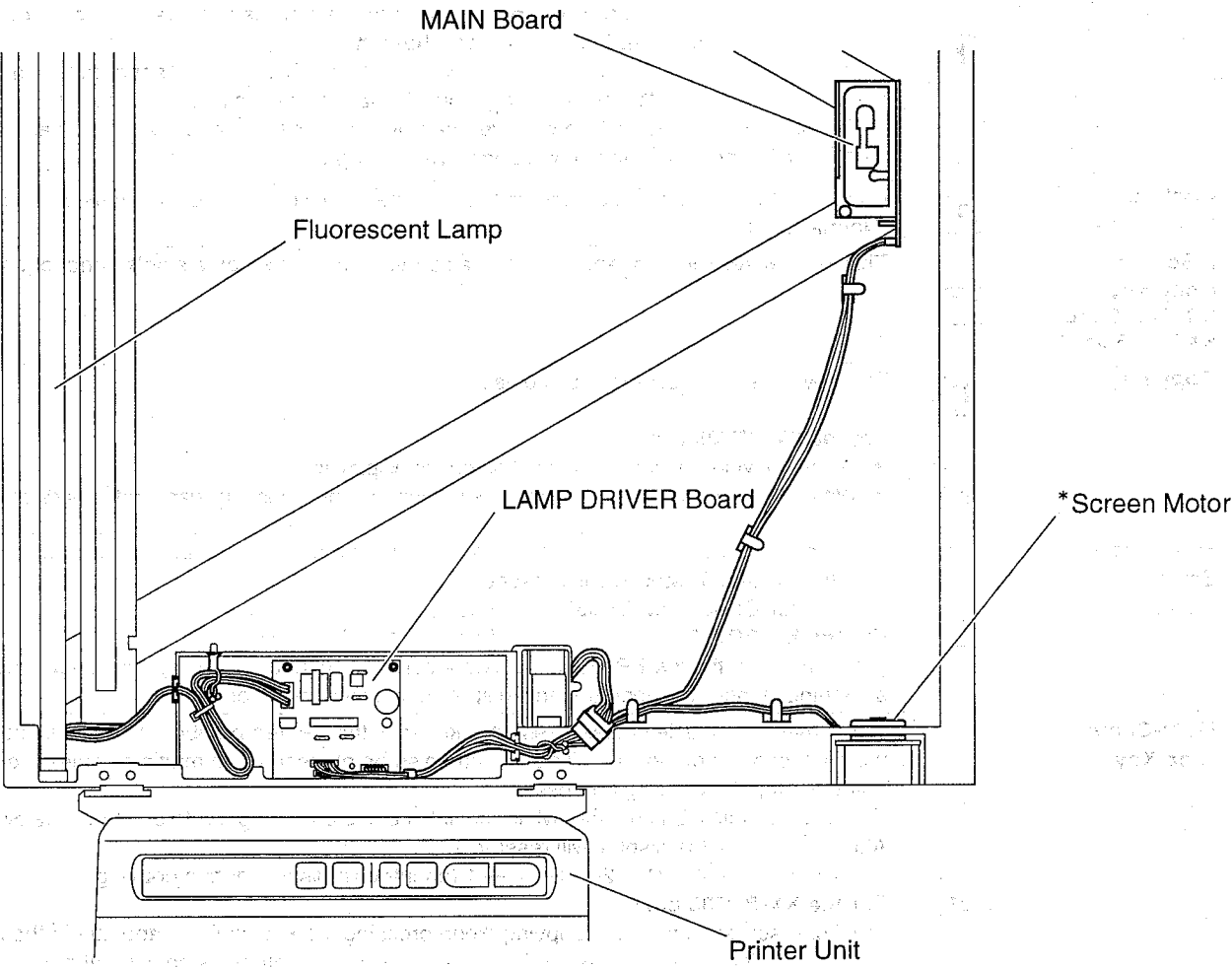
Control Panel for KX-BP735



## The control panel

Name	Panel	Description
① Contrast/ Remaining Film Indicator		<p>This lamp indicator notifies the user when the thermal transfer film is approaching (estimated) to replace, and also notices the printing contrast condition during copying.</p> <p>Indicator off : Normal printing contrast  Indicator on : Darker than normal printing contrast  Indicator flashing : *Almost time to replace the thermal transfer film</p> <p><b>(Note that only about 15 more sheets may be copied when this indicator starts flashing.)</b></p> <p>Replacement film (KX-BP081 or KX-BP082) is separately available from the dealer where you purchased your unit.</p> <p>*The flashing indicator will go out after the power is turned off and the printer has been opened. (When copying, this indicator will begin flashing again.)</p>
② Contrast Key		Each time this key is pressed, the unit will alternate between normal and dark contrast modes (Normal/Dark).
③ 2-Screen Copy Key (KX-BP535 and KX-BP635 only)		This key causes the front and back of the screen to be copied on a single sheet of paper.
④ Copy Key	 <hr/> 	<p>This key causes the screen to be copied.</p> <p><b>For the KX-BP735 Only:</b></p> <ul style="list-style-type: none"> <li>When copying is finished, the next screen is displayed.</li> <li>With 4-screen continuous copying, the screen on which copying was started is displayed.</li> </ul>
⑤ Multi-Copy/ Error Indicator		<p>This indicator displays the number of copies to be made. The display changes each time the multi-copy/stop key is pressed.</p> <p><b>For the KX-BP535 and BP635</b> : Example 1→2→...→9→1→...  <b>For the KX-BP735</b> : Example 1→2→...→9→!!→1→...  ("!!" is used by the KX-BP735 to indicate 4-screen continuous copying.) When an error occurs, a flashing symbol will appear in this display to indicate the error status.</p>
⑥ Multi-Copy/ Stop Key		<p>When making multiple copies, press this key until the desired number of copies is displayed on the multi-copy/error indicator. This key can also be pressed while multiple copies are being made to stop the copying process.</p> <p>The display indication changes while multiple copies are being made as shown below.</p> <p>After reaching 0, the display will reset to 1.</p> <p>Example: 5→4→3→2→1→0→1 (countdown display during copying)</p> <p><b>For the KX-BP735 only:</b></p> <ul style="list-style-type: none"> <li>For 4-screen continuous copying, keep pressing the key until "!!" appears in the multi-copy/error indicator. Also press the key to stop 4-screen continuous copying at any time.</li> <li>The display indication changes while 4-screen continuous copies are being made as shown below. After reaching 0, the display will reset to 1.</li> </ul> <p>!! → ! → , → , → 0 → 1 (display during 4-screen continuous copying)</p>
⑦ Advance Key	 <hr/>  (KX-BP735)	<p>This key advances the screen from right to left.</p> <p><b>For the KX-BP735 only:</b></p> <ul style="list-style-type: none"> <li>Pressing this key twice will cause the screen to advance two screens from right to left.</li> </ul>
⑧ Reverse Key (KX-BP735 only)		<p>This key advances the screen from left to right.</p> <p>Pressing this key twice will cause the screen to advance two screens from left to right.</p>

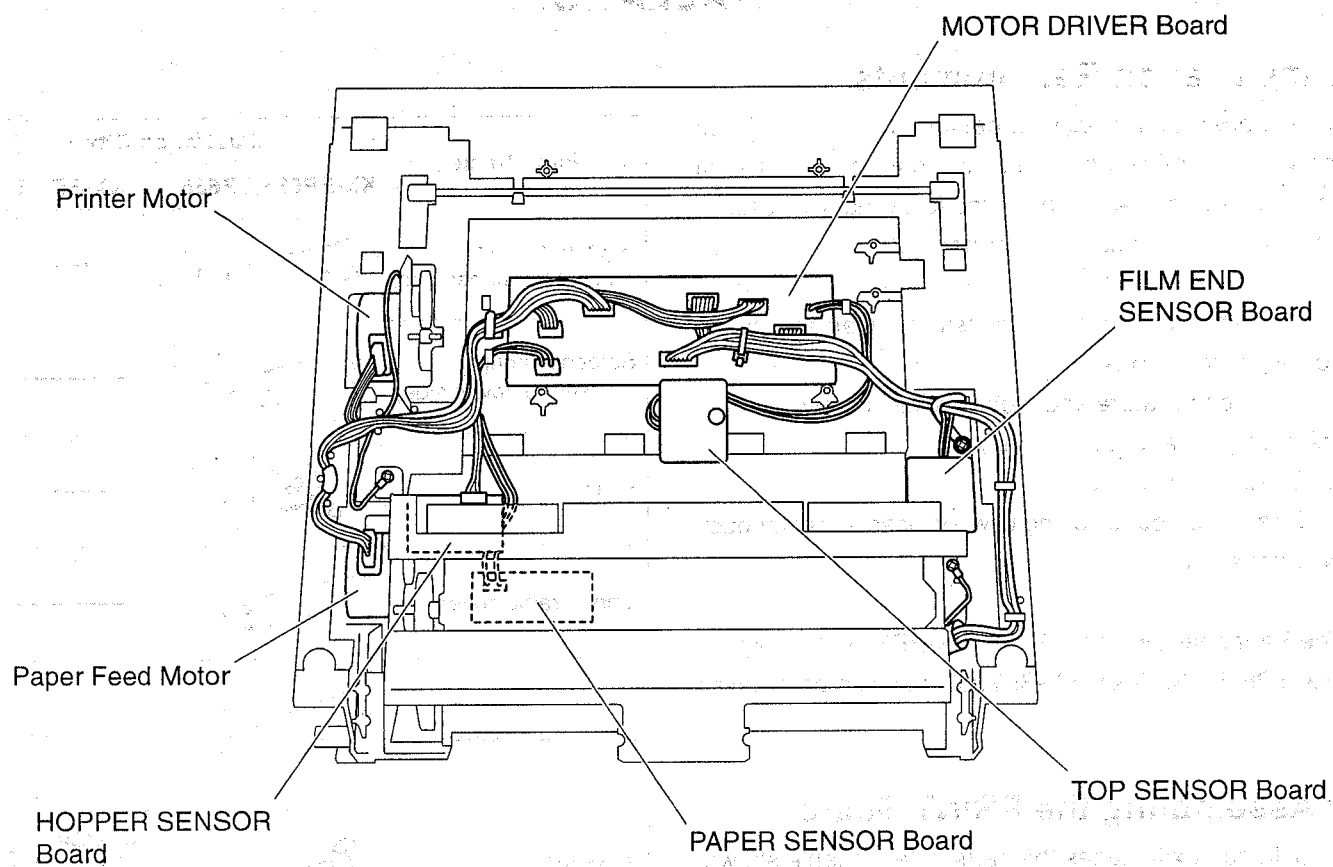
Optical Unit



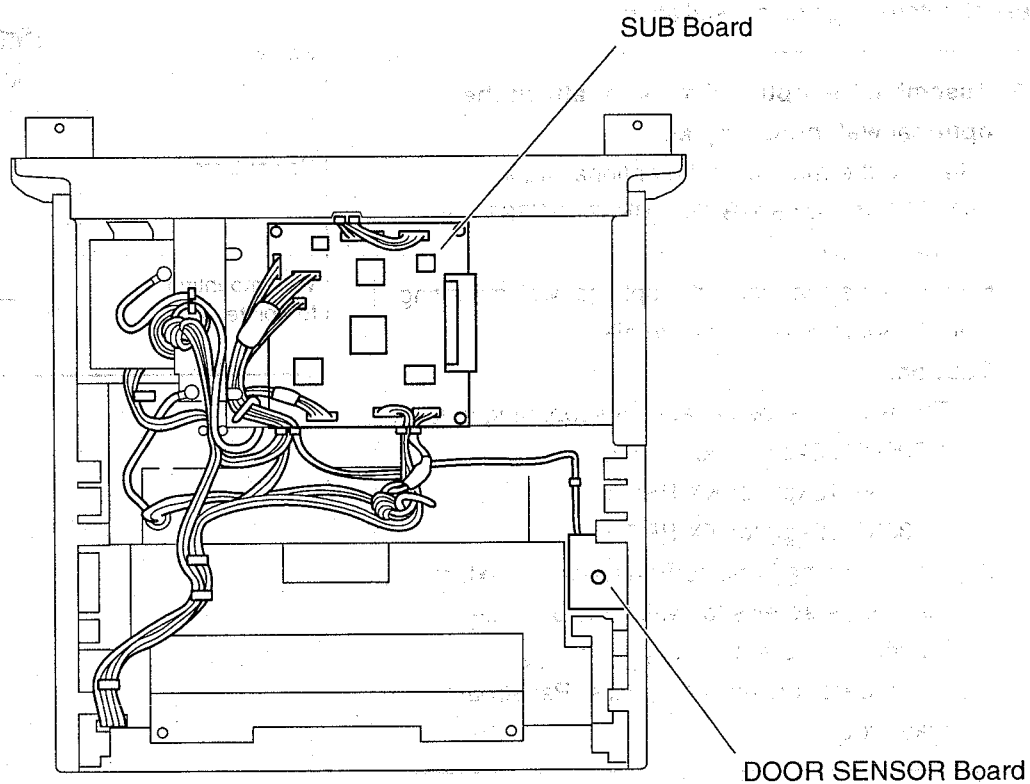
(Note)  
\* In case of KX-BP735, Screen Motor is included in Screen Unit.

## Printer Unit

### 1) Front Side



### 2) Rear Side



SECTION 4  
INSTALLATION

4.1 Installation Requirements

The Panaboard is a precision designed machine, which somewhat depends on the surrounding conditions for optimum operation. Attention to the following, will result in more reliability and quality performance.

- 1. The Panaboard should not be installed in areas with the following conditions.
  - (1) High temperature and high humidity or low temperature and low humidity.
  - (2) Direct exposure to sunlight.
  - (3) Direct in air conditioning flow, or close to heater duct.
  - (4) Uneven floor.
- 2. The Panaboard weight: 34 kg (KX-BP535), 36.5 kg (KX-BP635), 38.5 kg (KX-BP735), it should be installed on sturdy flat surface.

4.2 Assembling the PRINT Board








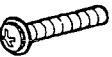

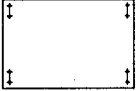
The package box includes the parts noted in table shown in the right hand column; please confirm that all parts are present before beginning installation.

**1. Assemble the optional stand or attach the optional wall mounting kit.**

- Refer to the manual of the optional stand KX-B061/M (for KX-BP535/BP635/BP735) for further details.
- Refer to the manual of the optional wall mounting kit KX-B063/M for further details.

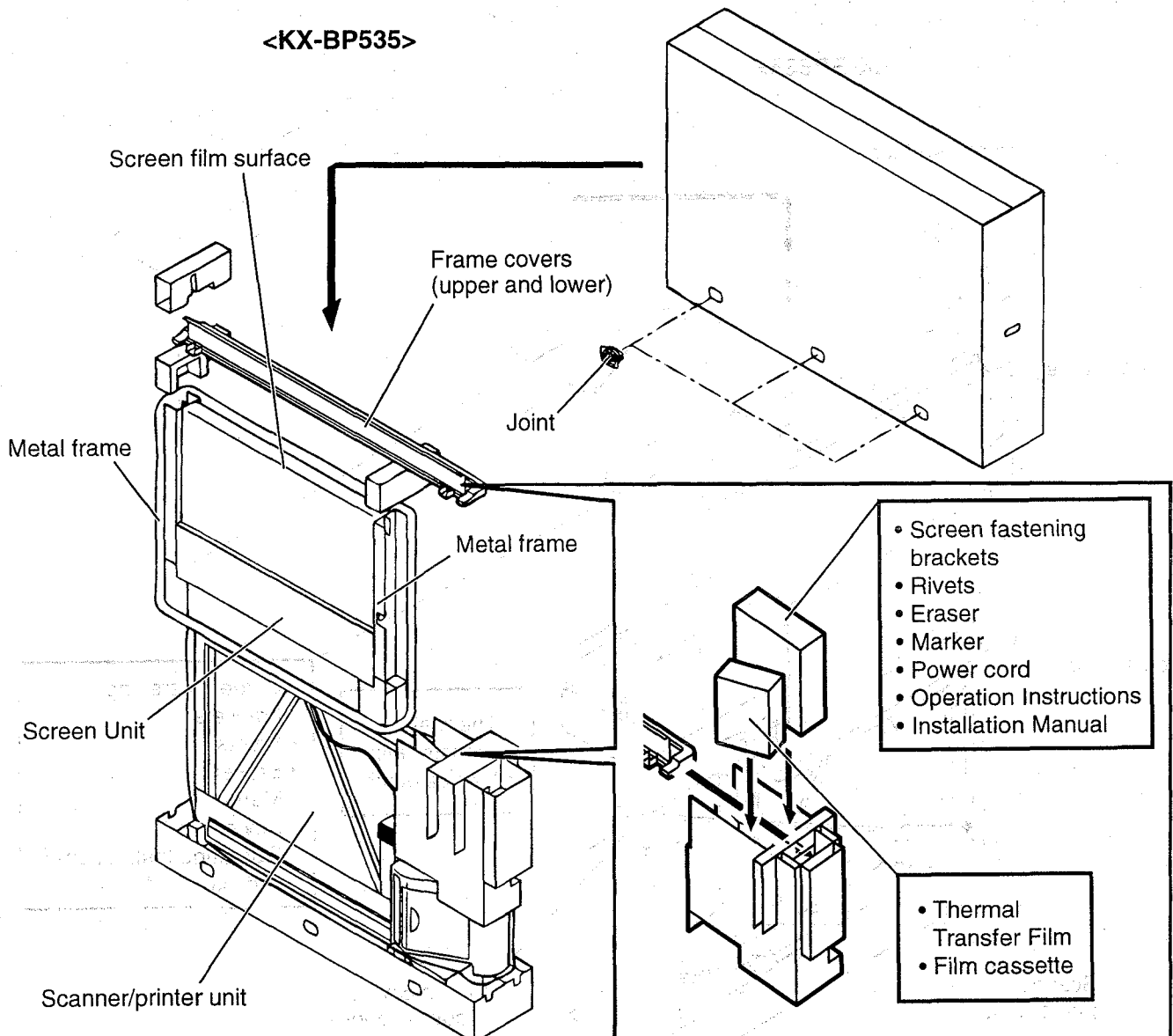
**Caution:**

- (1) The wall must be capable of supporting at least  
1,005N[103kgf] for KX-BP535  
1,107N[113kgf] for KX-BP635  
1,130N[116kgf] for KX-BP735
- (2) After finishing hanging Panaboard on fixture, make sure screws for wall hang on Wall-mounting fixture, perfectly, by pulling Panaboard forward. Otherwise, Panaboard may drop.

Parts Name	Illustration/Q'ty	
	KX-BP535/BP635	KX-BP735
Screen fastening bracket (for upper side)	 x 1	_____
Screen fastening bracket (for lower side)	 x 1	_____
Rivet	 x 4	_____
Upper frame cover	 x 1	_____
Lower frame cover	 x 1	_____
Wing bolt	 x 2	 x 2 M4 x 12mm
Screw	 x 1 M4 x 16mm	_____
Power Cord	 x 1	
Wall-mounting template	_____	 x 1

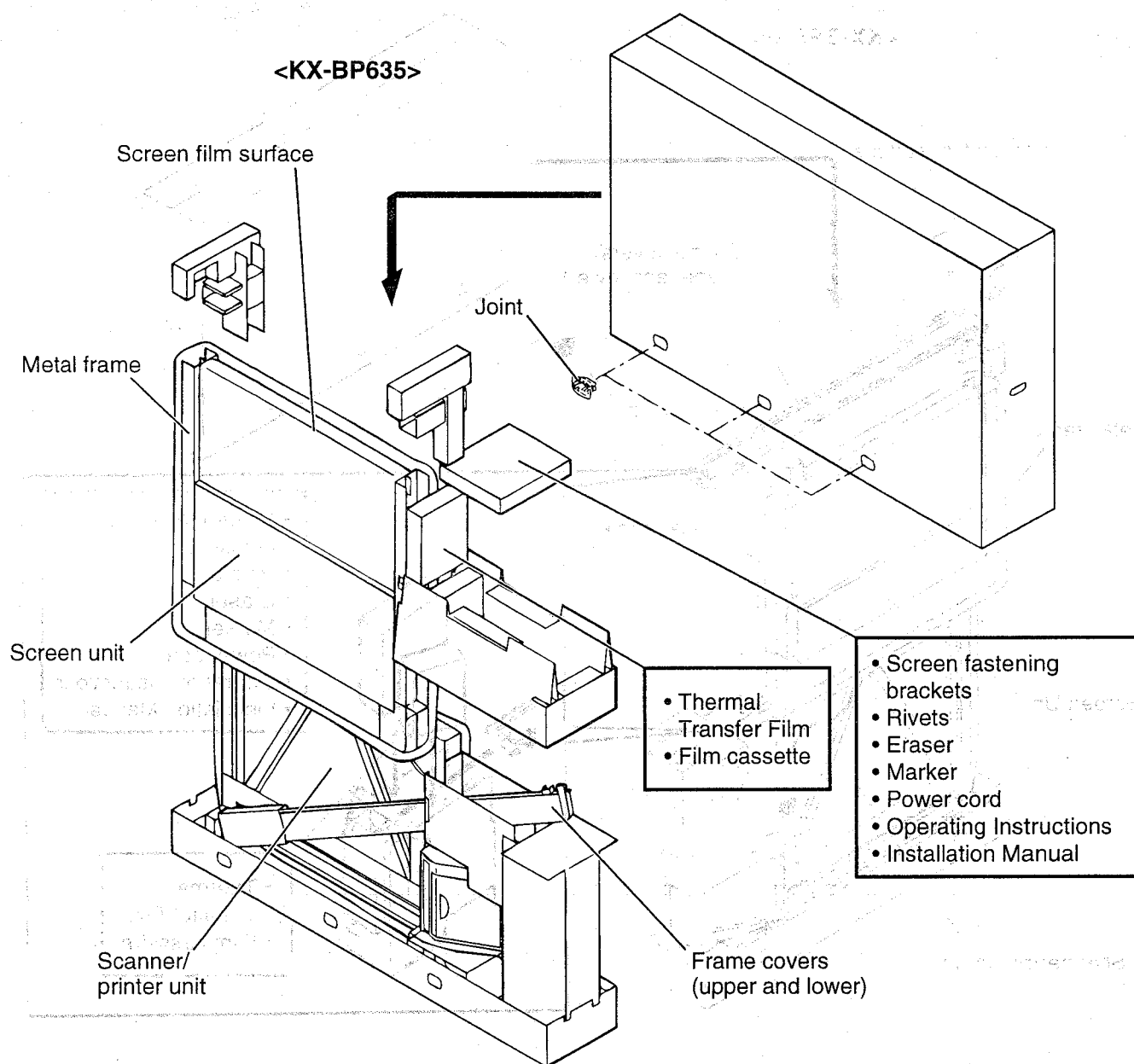
**KX-BP535/BP635****2. Remove the print board from the shipping box.**

Remove the joints, then remove the print board from the shipping box.

**Caution**

- When removing the screen unit, grasp the metal frames on either side of the screen. Do not grasp the screen film surface, as this may scratch it.
- The shipping box, cushioning material, and other packaging materials will be necessary if you ever need to repackage the print board, so do not throw them away.

KX-BP535/BP635



**Caution**

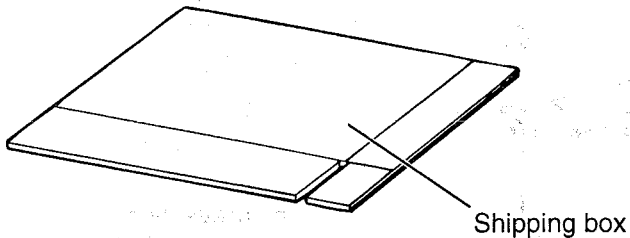
- When removing the screen unit, grasp the metal frames on either side of the screen. Do not grasp the screen film surface, as this may scratch it.
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**KX-BP535/BP635**

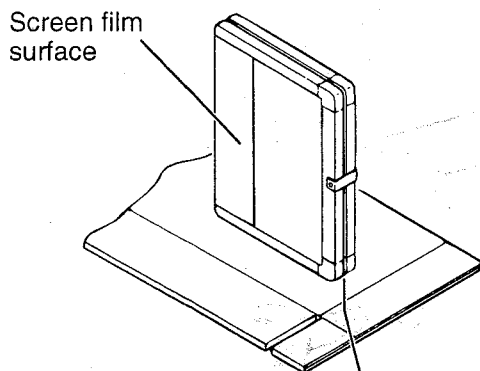
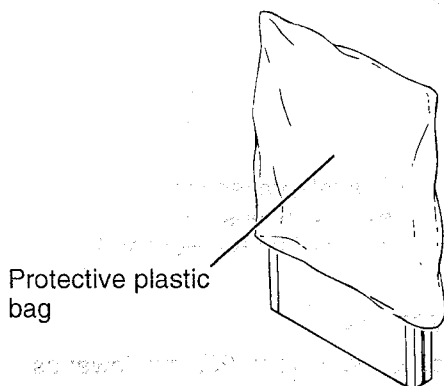
**3. Collapse the shipping box.**

Remove the tape on the unopened side of the shipping box, then collapse the box.



**4. Remove the protective plastic bags.**

After removing the protective plastic bags from the screen unit and scanner/printer unit, set those units on top of the collapsed shipping box.



Set the unit so that the gear side is on the bottom.

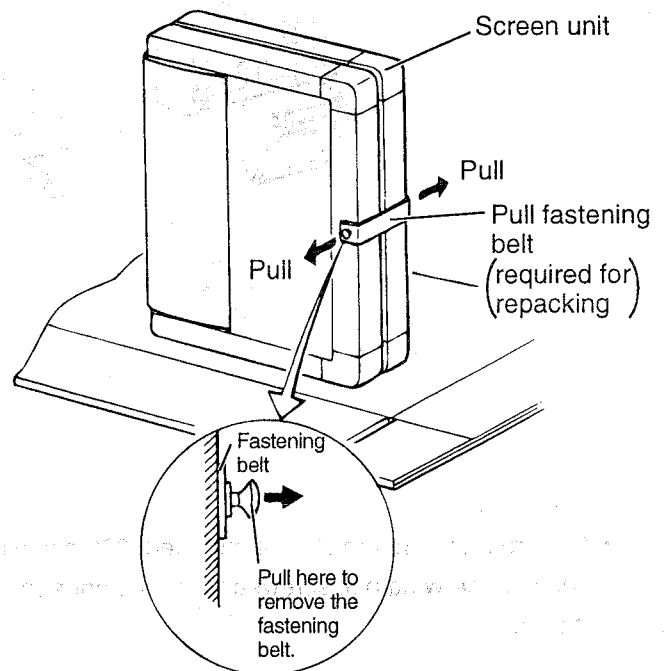
**Caution**

- Do not touch the screen film surface as doing so may damage it.

**5. Attach the scanner/printer unit to the optional stand or wall-mounting kit.**

- If you are using a stand, refer to page 4-5 to use the optional stand.
- If you are using a wall mounting kit, refer to page 4-6 to mount on a wall.

**6. Remove the fastening belt.**



**Caution**

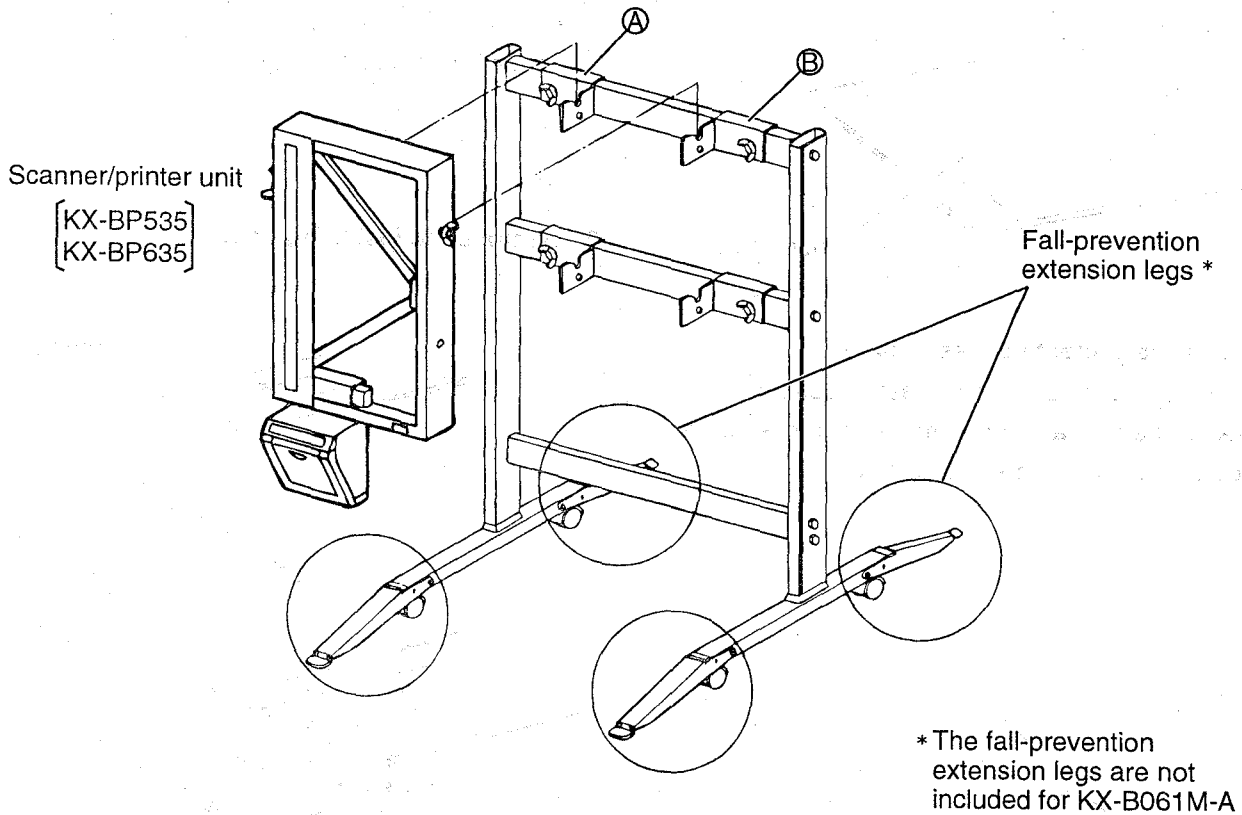
- Do not lift screen unit, holding fastening belt.

**KX-BP535/BP635**

**To use the optional stand**

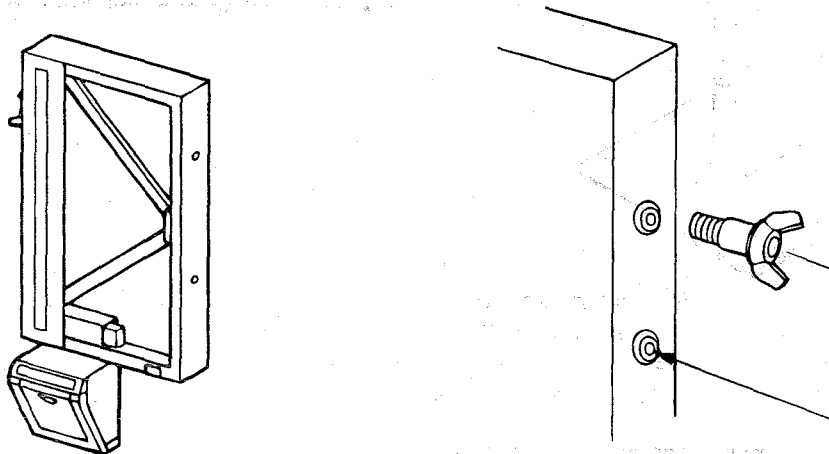
**Attach the scanner/printer unit.**

1. Hang the scanner/printer unit on the installing fixtures (A)(B).



- If desired, print board can be mounted 200 mm higher (For KX-BP535/BP635 only).

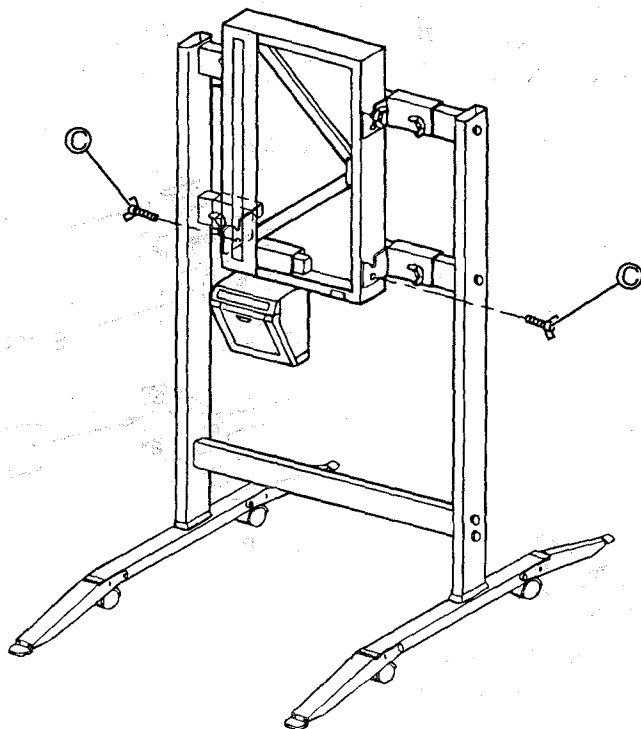
Remove the wing bolt screwed to the scanner/printer unit and attach the bolt to the position 200 mm lower as shown.



## KX-BP535/BP635

### To use the optional stand

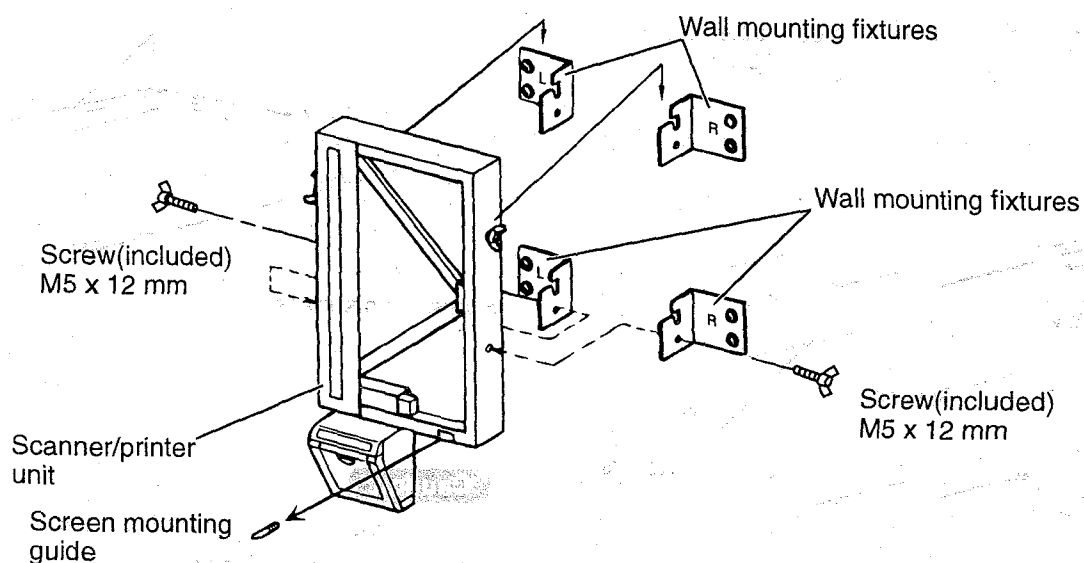
2. Install the scanner/printer unit with the two wing-bolts ©.



### To mount on a wall

#### Mounting the scanner/printer unit

1. Hang the scanner/printer unit.
2. Screw the two wing bolts into the lower side wall-mounting fixtures.
3. Remove the screen mounting guide.



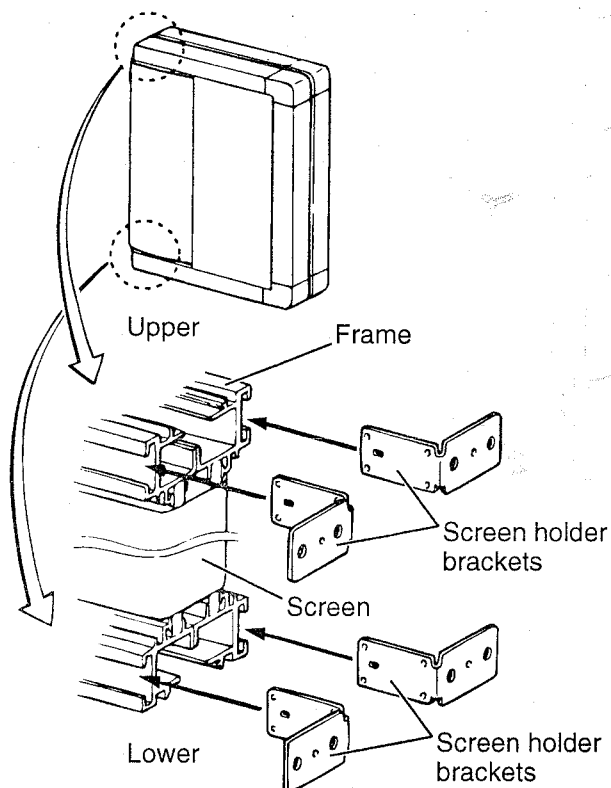
**Note:** When mounting the scanner/printer unit, avoid banging it.  
Such impact may cause the internal fluorescent lamp to break or lead to other damage.

**KX-BP535/BP635**

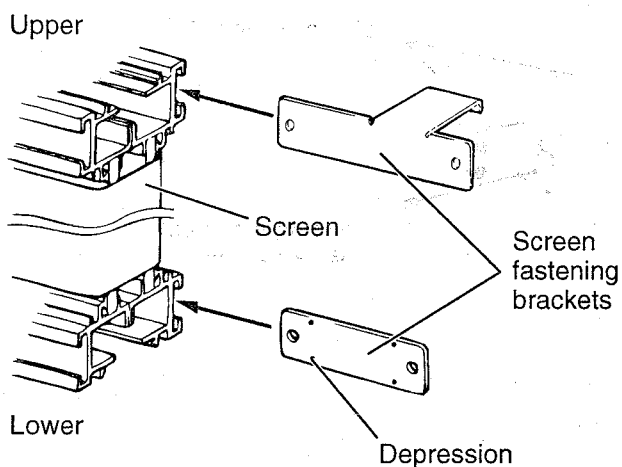
**7. Attach the brackets to the screen unit.**

• **If you are using a stand:**

- (1) Insert the four screen holder brackets supplied with the stand into the screen unit frame.

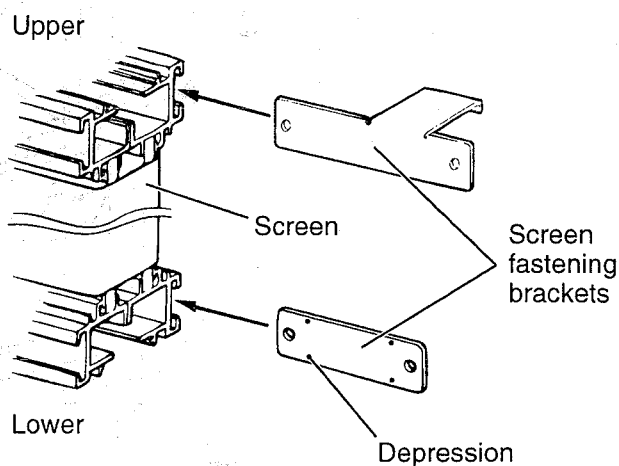


- (2) Insert the two supplied screen fastening brackets into the screen unit frame.

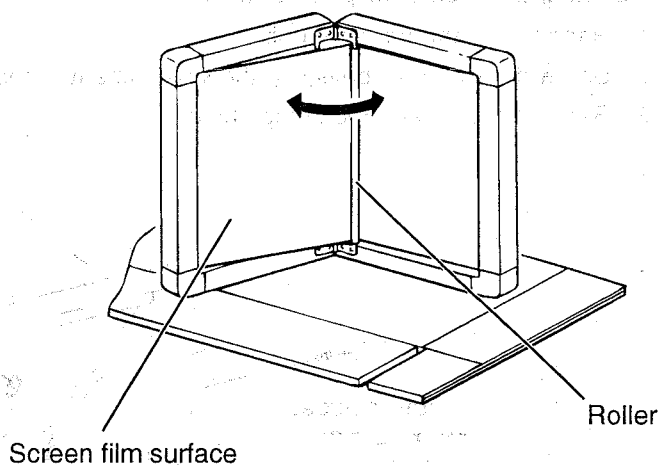


• **If you are using a wall-mounting kit:**

Insert the two supplied screen fastening brackets into the screen unit frame.



**8. Open the screen film surface.**



**Caution**

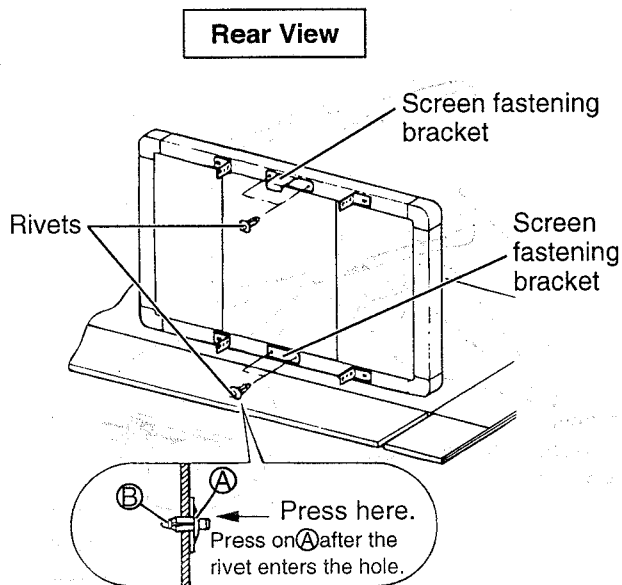
- When opening the screen film surface, be careful not to scratch or wrinkle it.

**KX-BP535/BP635**

**9. Fasten the brackets.**

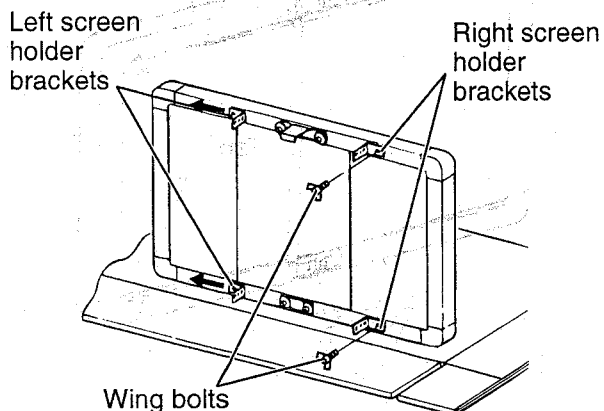
• **If you are using a stand:**

1. Move the screen fastening brackets toward the center and fasten them with the four rivets.



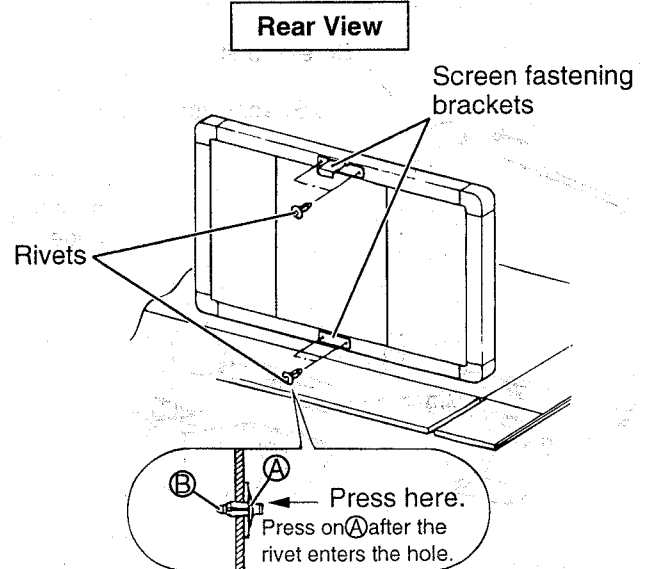
- To remove a rivet, press harder on, (A) then pop the rivet back out while gripping (B).

2. Move the two screen holder brackets on the right to the screw hole positions, then fasten them with the two wing bolts supplied with the stand.
3. Move the two screen holder brackets on the left in the direction of the arrow.



• **If you are using a wall mounting kit:**

Move the screen fastening brackets toward the center and fasten them with the four rivets.

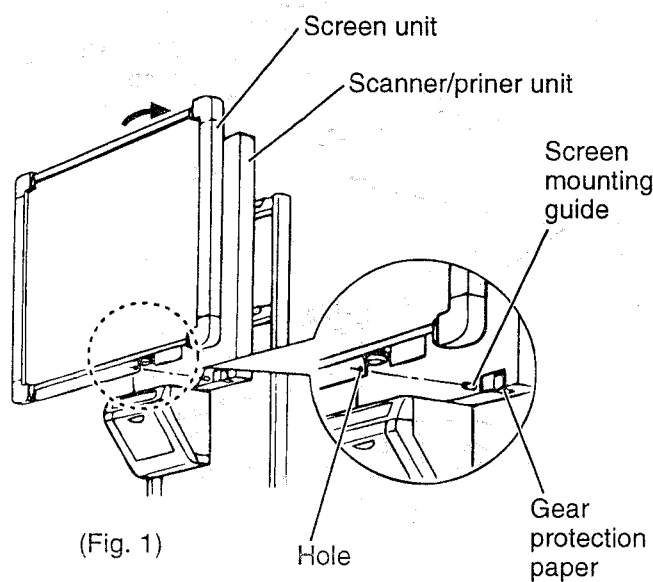


- To remove a rivet, press harder on, (A) then pop the rivet back out while gripping (B).

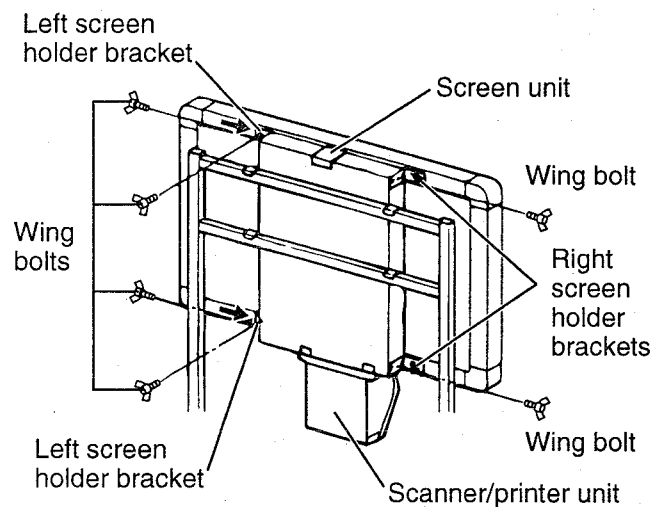
KX-BP535/BP635

10. Attach the screen unit to the scanner/printer unit.  
• If you are using a stand:

- (1) Hang the screen unit on the scanner/printer unit, fitting the screen mounting guide through the hole on the screen unit (Fig. 1).

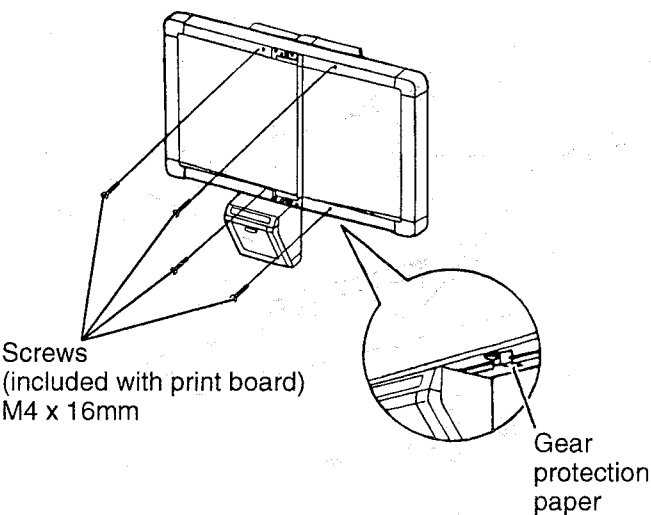


- (2) Fasten the right screen holder brackets using two of the wing bolts supplied with the stand (Fig. 2).
- (3) Move the left screen holder brackets in the direction of the arrow, then fasten them using 4 of the wing bolts supplied with the stand (Fig. 2).
- (4) Remove the gear protection paper (Fig. 1).



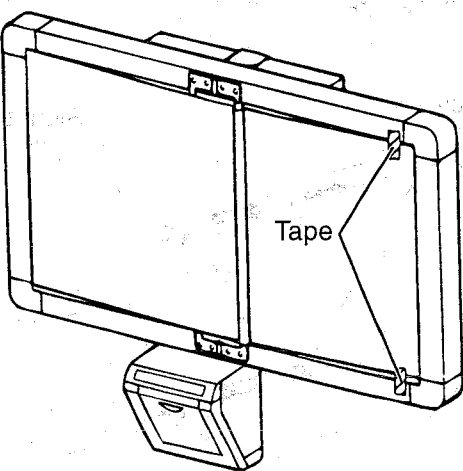
(Fig. 2)

- If you are using a wall mounting kit: refer to page 4-6 Mounting the scanner/printer unit.
- (1) Hang the screen unit on the scanner/printer unit and fix with the four provided screws.
- (2) Remove the paper (gear protection paper).



**Note:** After mounting the electronic print board, place weight gently on the print board to confirm that the wall is strong enough to support it.

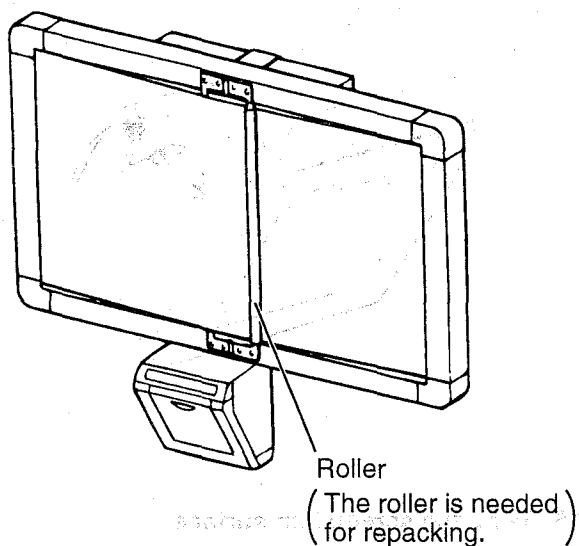
11. Remove the tape.  
Remove the tape fastening the screen film surface.



## KX-BP535/BP635

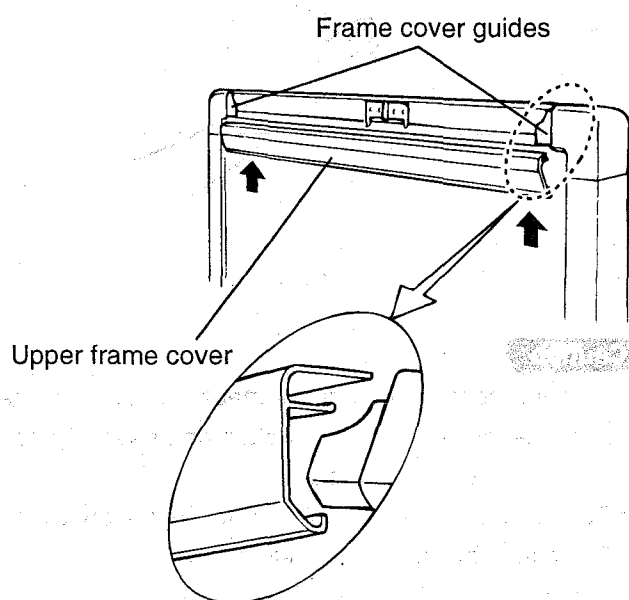
### 12. Remove the roller.

Bend and remove the roller.

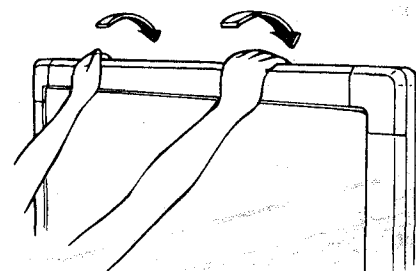


### 13. Attach the upper frame cover.

1. Align the upper frame cover with the frame cover guides on the left and right ends, then lift it up in the direction of the arrows.

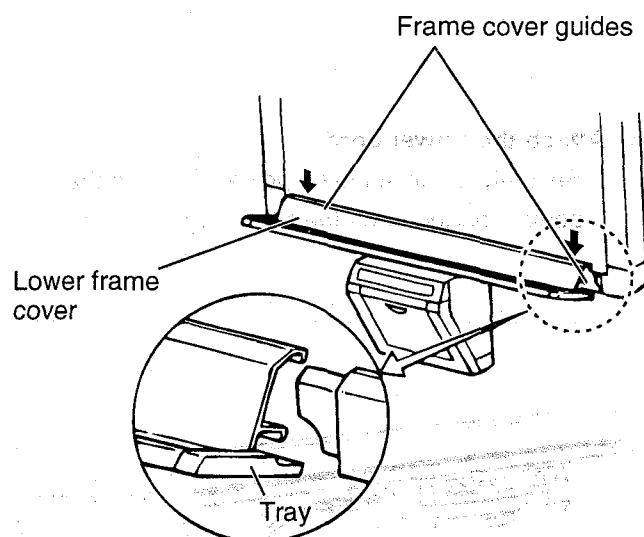


2. Place your hands on either end of the upper frame cover and push down on it in the direction of the arrows until the cover clicks into place.



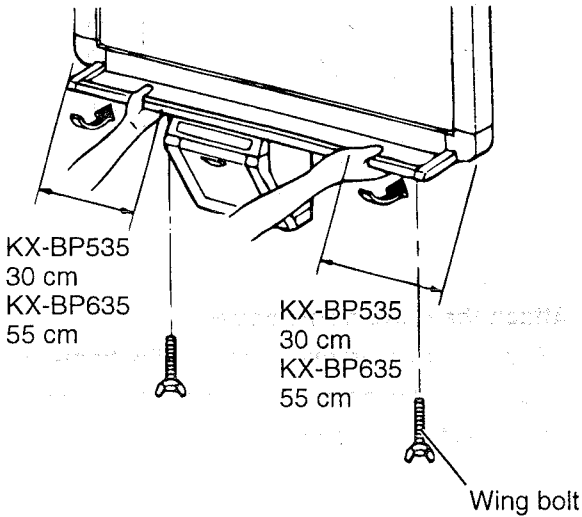
### 14. Attach the lower frame cover.

1. Align the lower frame cover with the frame cover guides on the left and right ends, then lower it in the direction of the arrows.



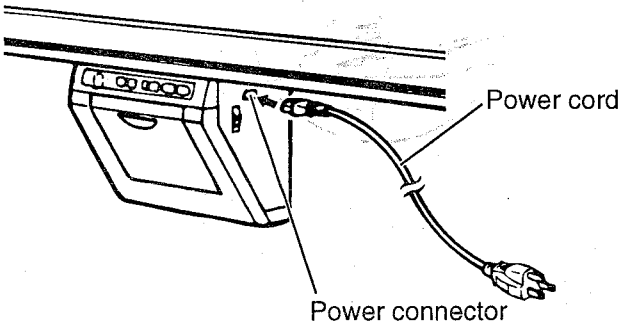
KX-BP535/BP635

2. Place your hands on either end of the lower frame cover at the specified points (see the figure) and push on it in the direction of the arrows until the cover clicks into place. Next, fasten the cover with the two supplied wing bolts.

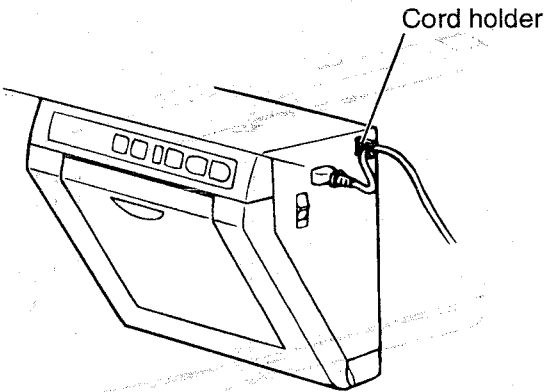


15. Attach the power cord.

1. Securely fit the supplied power cord into the power connector on the printer unit.

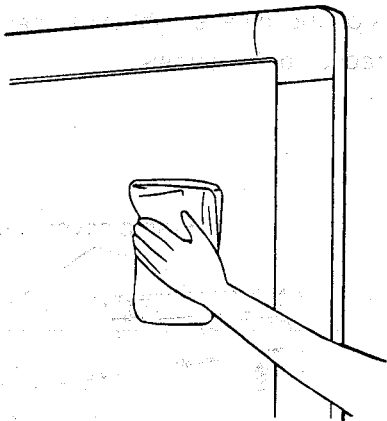


2. Fit the power cord into the cord holder.



16. Wipe the screen film surface.

Soak a soft cloth with water, wring well, and wipe the screen film surface.



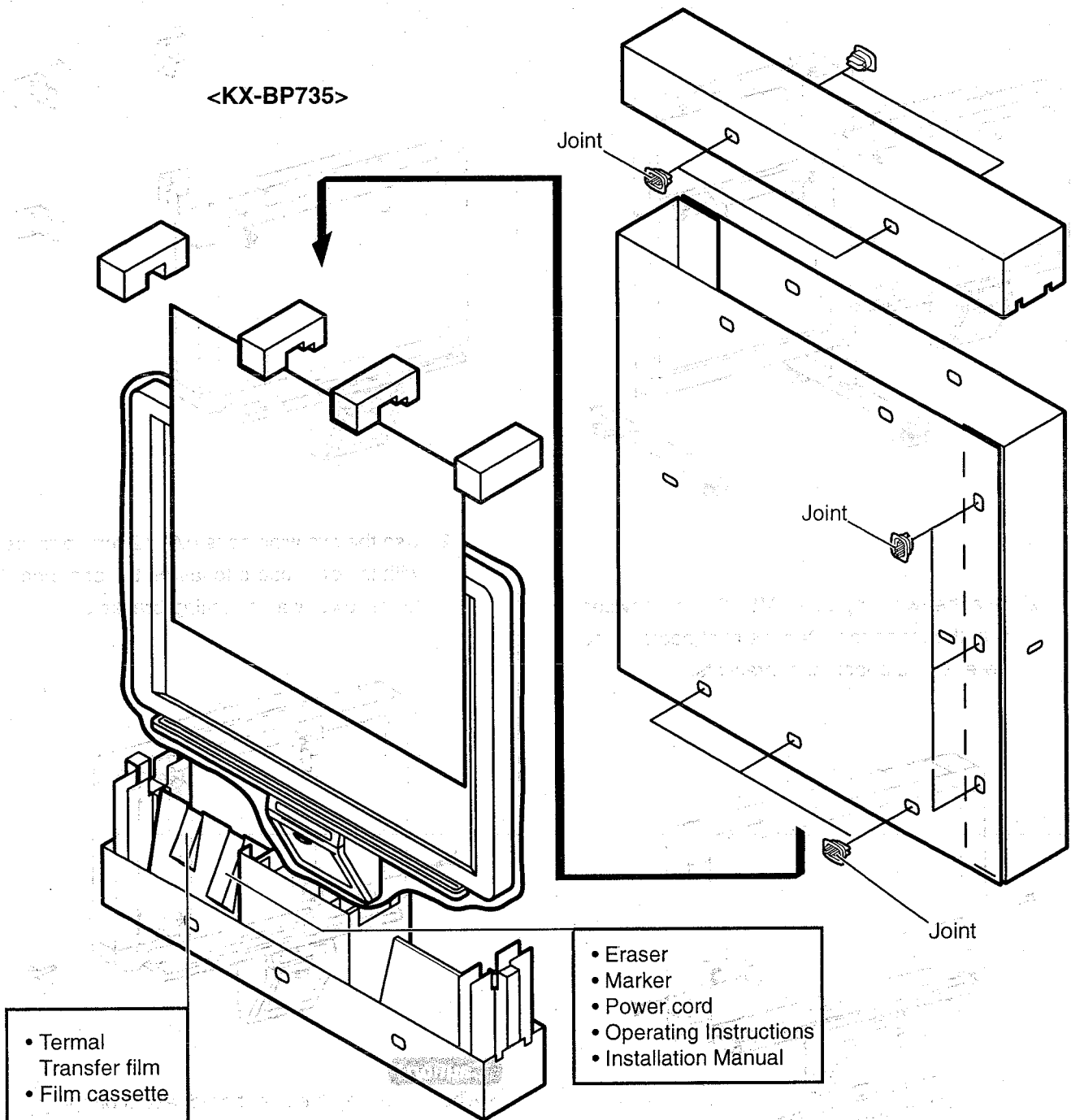
Caution

- Do not wipe the screen film surface with paint thinner, benzene, or cleaners that contain abrasives. Doing so may cause discoloration.
- Do not wipe the screen film surface with a dry cloth. Doing so may create static electricity.



**KX-BP735****2. Remove the print board from the shipping box.**

Remove the joints, then remove the print board from the shipping box.

**Caution**

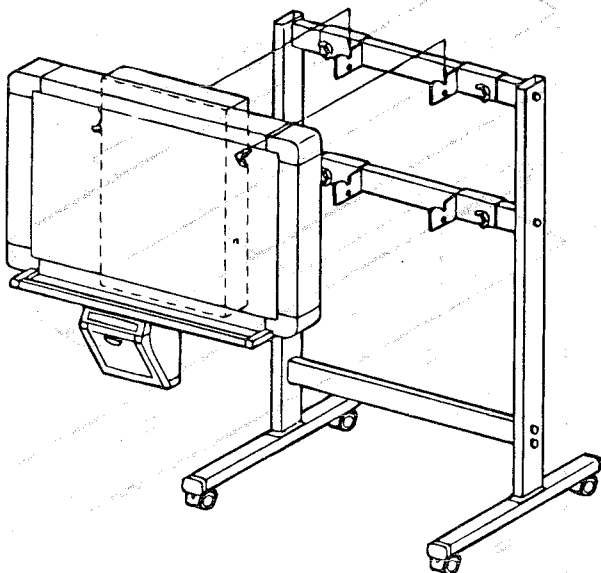
- Do not touch the screen film surface as doing so may damage it.
- The shipping box, cushioning material, and other packaging materials will be necessary if you ever need to repackage the print board, so do not throw them away.

KX-BP735

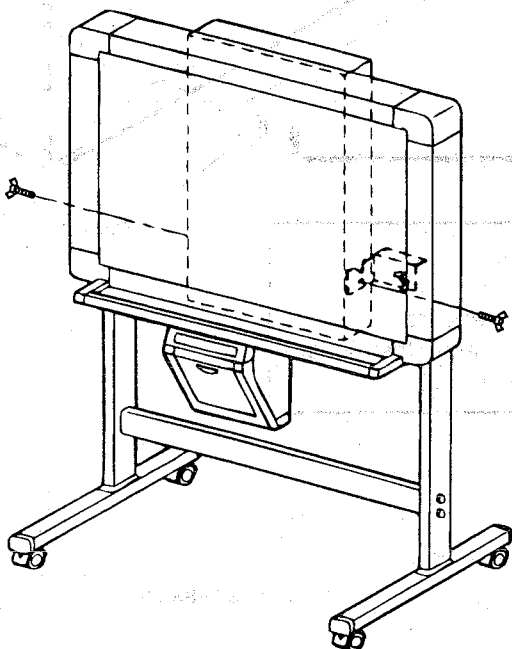
3. Attach the print board.

• If you are using a stand:

- (1) Hang the print board on the attachment brackets of the stand.

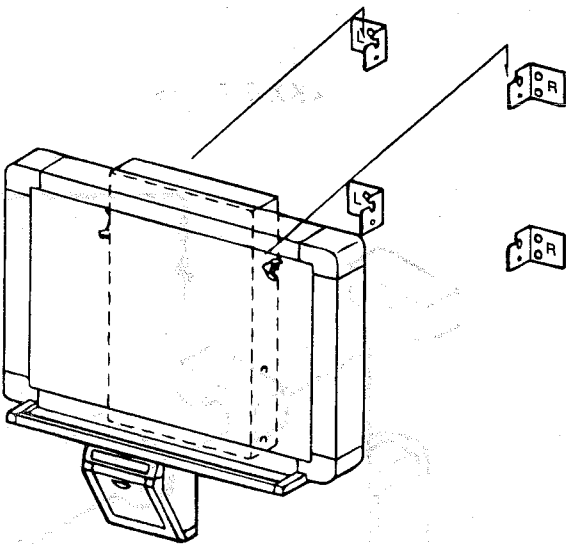


- (2) Use the two wing bolts (M5 12 mm) provided with the stand to fasten the print board to the lower stand attachment brackets.

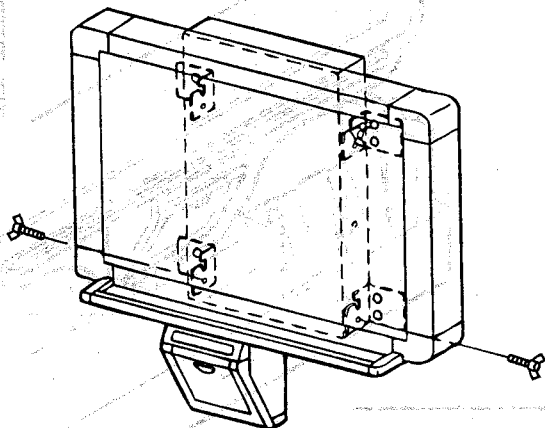


• If you are using a wall mounting kit:

- (1) Hang the print board on the wall mounting brackets supplied with the wall mounting kit.



- (2) Use the two wing bolts (M4 12 mm) provide with the print board to fasten the print board to the lower wall mounting brackets.



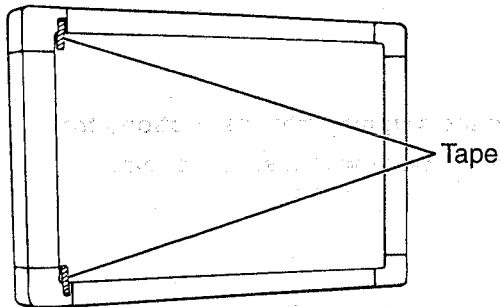
Caution

- When mounting the print board, avoid banging it. Such impact may break the internal fluorescent light or cause other damage.
- After mounting the print board, gradually apply weight to it to make sure that the wall is strong enough to support it.

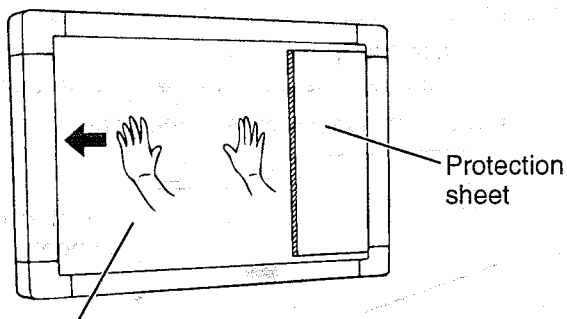
## KX-BP735

### 4. Remove the protection sheet.

- (1) Remove the pieces of tape on the screen film surface.

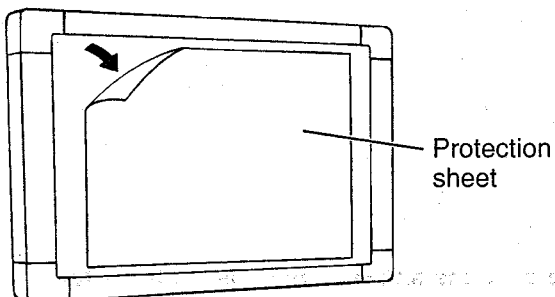


- (2) Move the screen film surface to the left by hand until the entire protection sheet is exposed.



Screen film surface

- (3) Remove the protection sheet.

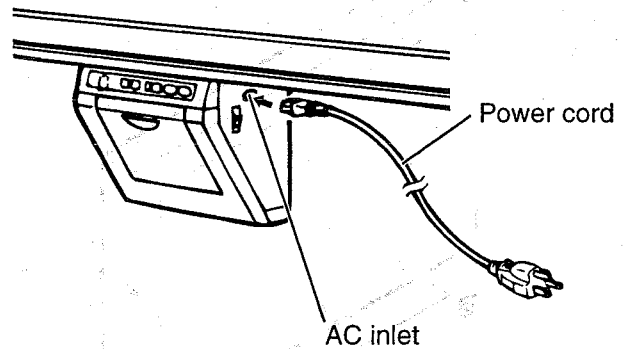


#### Caution

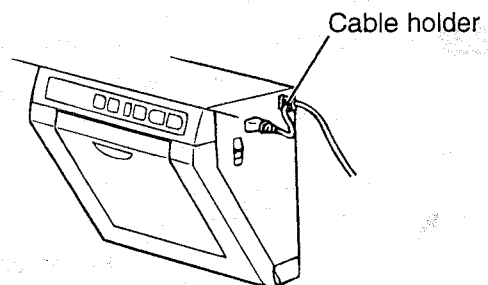
- After removing the protection sheet, do not lay print board down. Otherwise, the screen may not move.

### 5. Attach the power cable.

- (1) Securely fit the supplied power cord into the AC inlet on the printer unit.

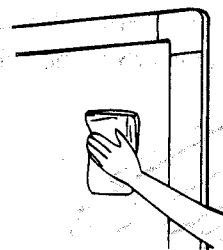


- (2) Fit the power cord into the cable holder.



### 6. Wipe the screen film surface.

Soak a soft cloth with water, wring well, and wipe the screen film surface.



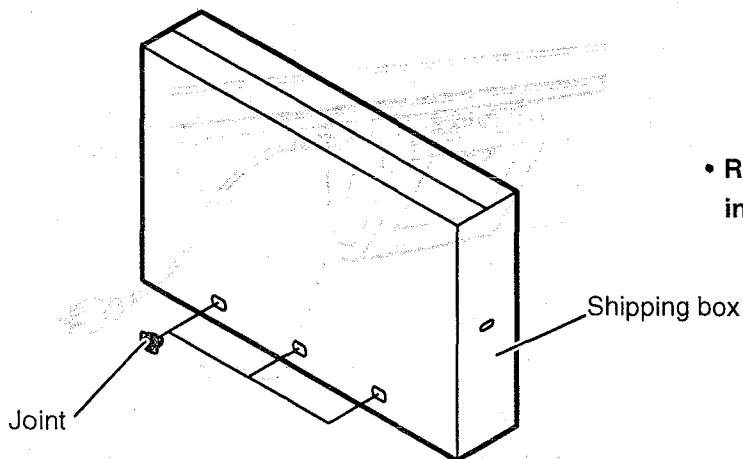
#### Caution

- Do not wipe the screen film surface with paint thinner, benzene, or cleaners that contain abrasives. Doing so may cause discoloration.
- Do not wipe the screen film surface with a dry cloth. Doing so may create static electricity.

## 4.3 Repacking

### KX-BP535/BP635

Perform Assembly step 2 through 16 in reverse to repack the print board and accessories. Use the joint to fasten the shipping box to the lower box.



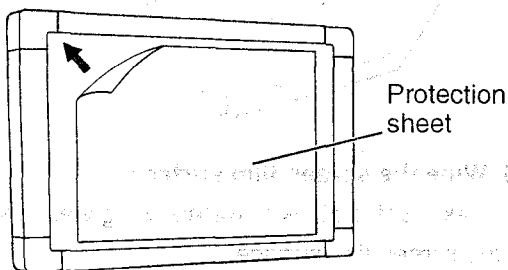
- Refer to the shipping box instructions for information on how to fasten the joints.


### KX-BP735

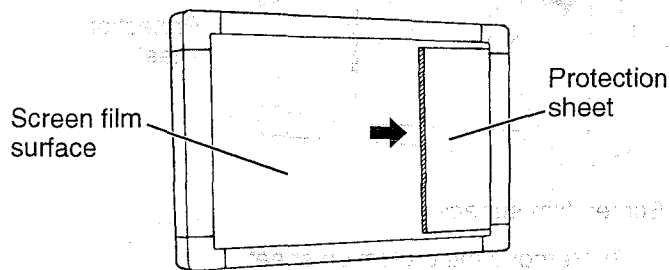
#### Caution

- Before repacking, be sure to attach the protection sheet to the screen film surface using the procedure shown below. Do not move the screen film surface with your hands.

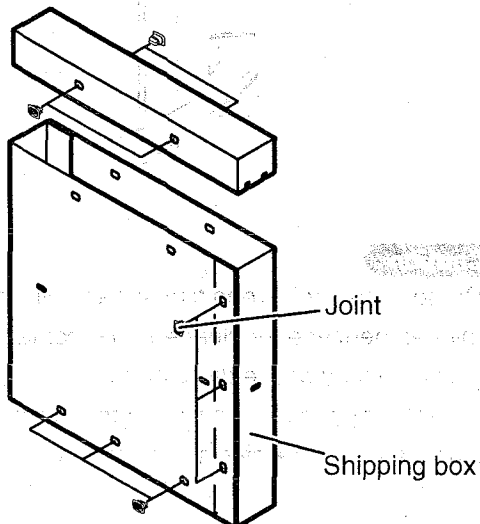
(1) Set the protection sheet on the screen film surface.



(2) Press the reverse feed key  to feed the screen film surface once to the right.



(3) Perform Assembly Steps 2 through 6 in reverse to repack the print board and accessories. Use the joints to fasten the shipping box to the upper and lower box.

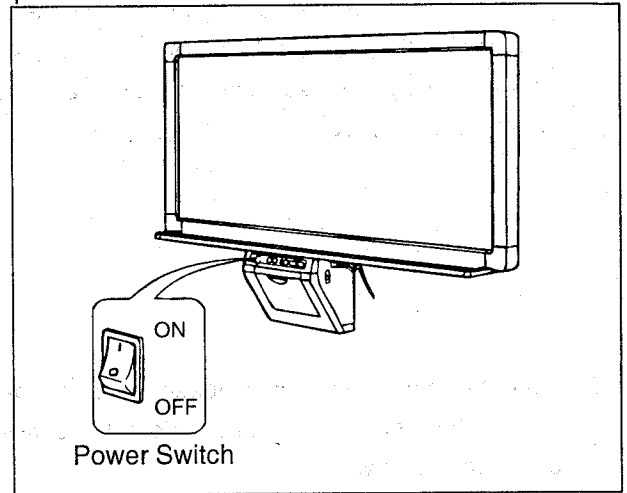


- Refer to the shipping box instructions for information on how to fasten the joints.

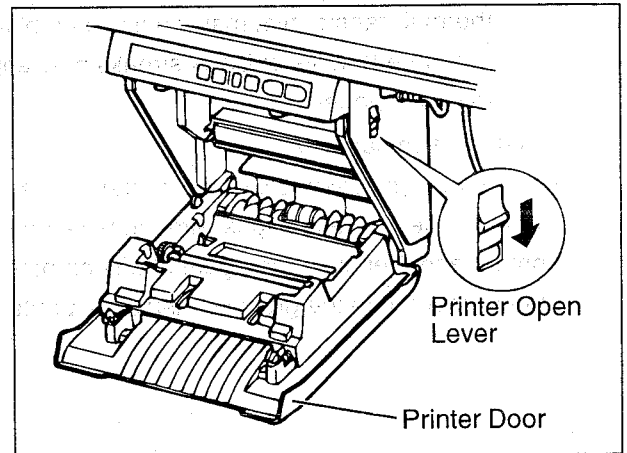
## 4.4 Installing Thermal Transfer Film

Load the thermal transfer film into the film cassette and install in the printer.

1. Set the power switch to on ( I ).
  - " I " will flash on the multi-copy/error indicator when the transfer film has run out.

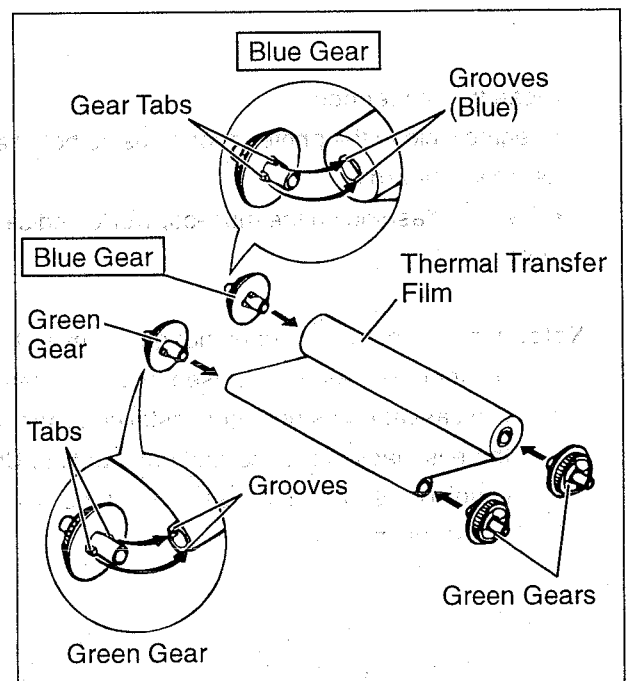


2. Push down the printer open lever and open the printer door.



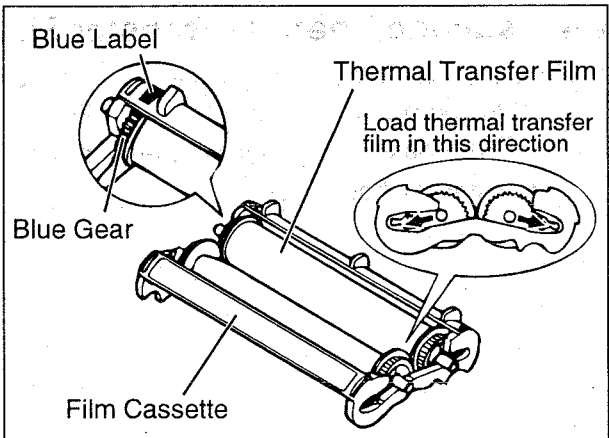
3. Insert the four gears into the new thermal transfer film.
  - Securely align the gear tabs with the grooves in the thermal transfer film and insert them as far as they will go.

**Note:** There is a blue gear and three green gears which need to be attached as shown in the figure.



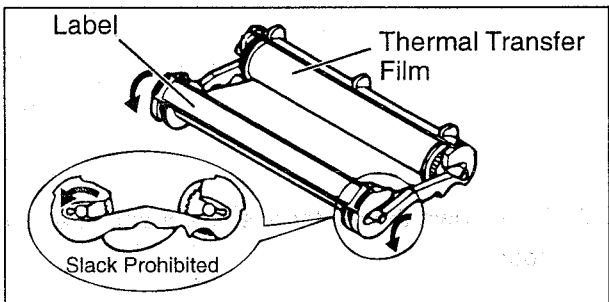
4. Load the thermal transfer film into the film cassette.

- Load the thermal transfer film into the film cassette so that the blue gear inserted in the thermal transfer film is located on the blue label side of the film cassette. Push in the direction of the arrow until you hear all four gear shafts click in place.



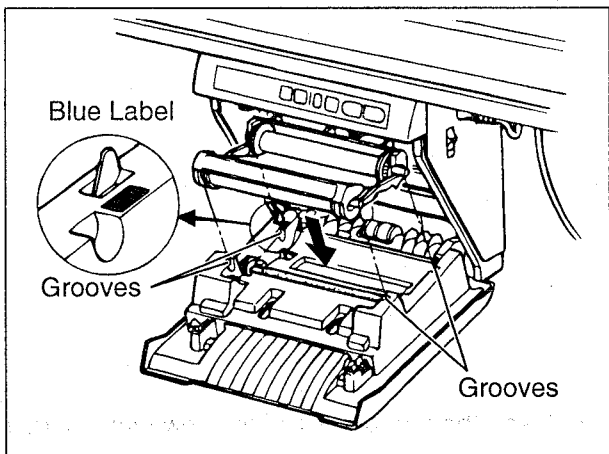
5. If the thermal transfer film is loose, take up looseness by winding the gears on the label side of the cassette in the direction of allows.

**Note:** •The multi-copy/error indicator may flash " " if the thermal transfer film is loose. In addition, the thermal transfer film may wrinkle, and blank (unprinted) spots or black streaks may appear on the copy paper.



6. Install the film cassette.

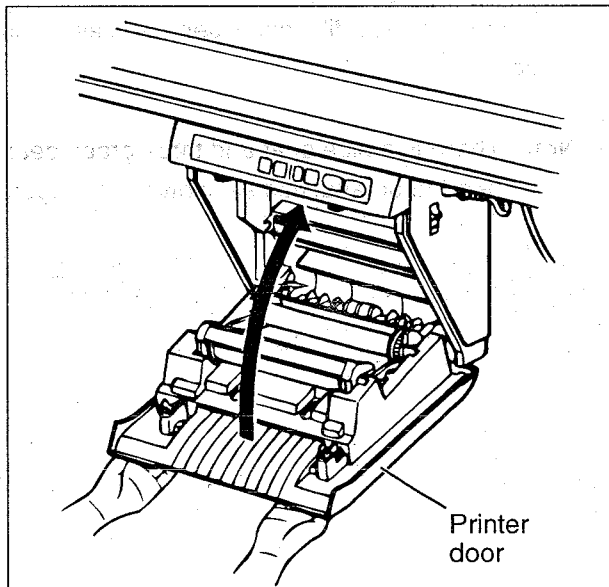
- Insert the film cassette into the printer so that the blue label on the cassette aligns with the blue label on the printer and then insert the gear shafts on both sides of the cassette into the grooves inside the printer.



7. Close the printer door

- Securely close the printer door by using both hands until a click is heard.
- The " " flashing on the multi-copy/error indicator will go out.

**Note:** If the flashing " " does not go out even though the printer door has been closed, this indicates that the film cassette has not been installed properly or that there is slack in the thermal transfer film. Check the condition of the film cassette and for slack in the transfer film.



## 4.5 Loading Copy Paper

It is possible to load up to 80 sheets of A4 (Letter) size copy paper (assuming a paper weight of 80g/m<sup>2</sup>).  
Note that only A4 (Letter) paper may be used.

When the unit is first used or when "P" flashes on the multi-copy/error indicator to indicate that the unit is out of paper, load copy paper as described below.

### Notes on Loading Copy Paper

Follow the guidelines below to ensure smooth and accurate scanning by the unit.

- Only use A4(Letter) size copying paper having a weight of 60 to 90g/m<sup>2</sup> as the copy paper for this unit.
- Do not simultaneously load paper of varying type and thickness as this may result in paper jams.
- Before adding copy paper, be sure to remove all copy paper inside the unit's paper cover.

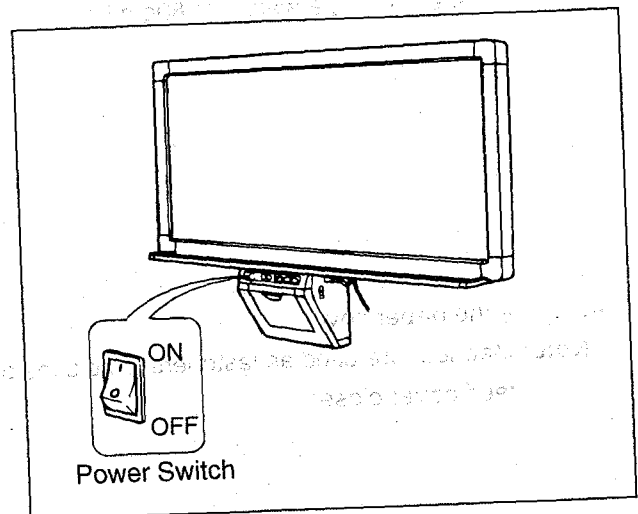
(Note that copy paper will slightly resist being removed, but may be pulled out without problems.)  
After removing the copy paper, stack the removed paper together with the new paper, fan it thoroughly, square it and reload.

### DO NOT USE THE FOLLOWING TYPES OF PAPER

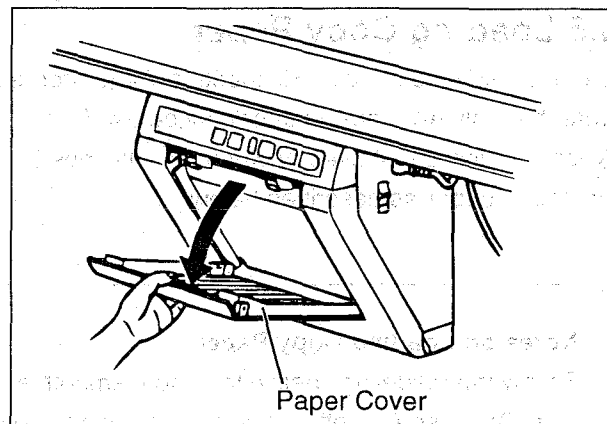
- Extremely smooth or glossy paper
- Coated paper
- Thermal paper
- Paper that is printed on one side
- Wrinkled paper, creased paper, etc.

1. Set the power switch to on (I).  
• "P" will flash on the multi-copy/error indicator when copy paper has run out.

**Note:** Be absolutely sure to check that the power switch is on when loading copy paper as it will not load properly otherwise.



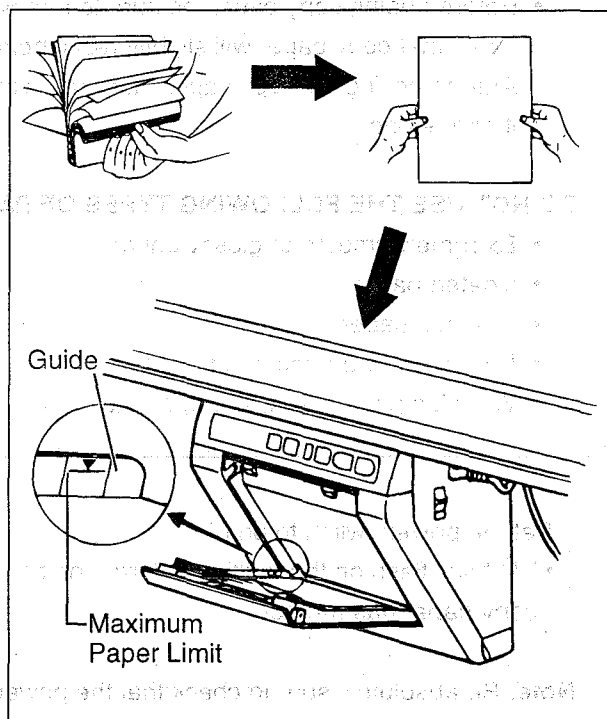
2. Pull the paper feed cover forward as shown in the figure to the right.



3. To prevent paper jams such as those caused by multiple sheets feeding at once, fan the paper thoroughly, square it, align it with the guide inside, and insert as far as it will go.

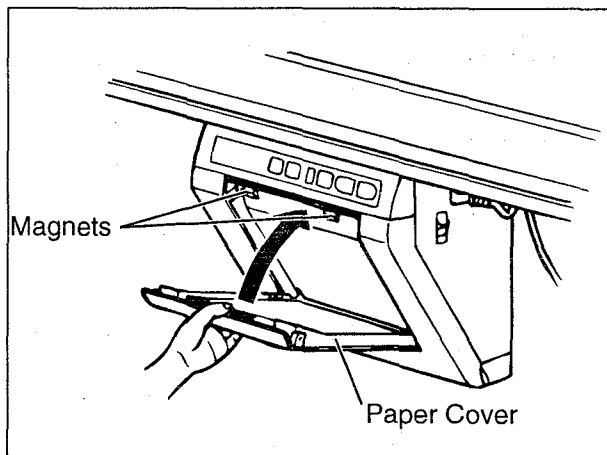
**Note:**

- Only use A4(Letter) size copying paper having a weight of 60 to 90g/m<sup>2</sup> as the copy paper for this unit.
- Do not stack more copy paper in the unit than the maximum paper limit indicated by the guide (see figure to the right) as this may result in paper jams. (Note that the unit can hold about 80 sheets of paper having a weight of 80g/m<sup>2</sup>.)



4. Close the paper cover.

















**Note:** Magnets are used as fasteners to hold the paper feed cover closed.





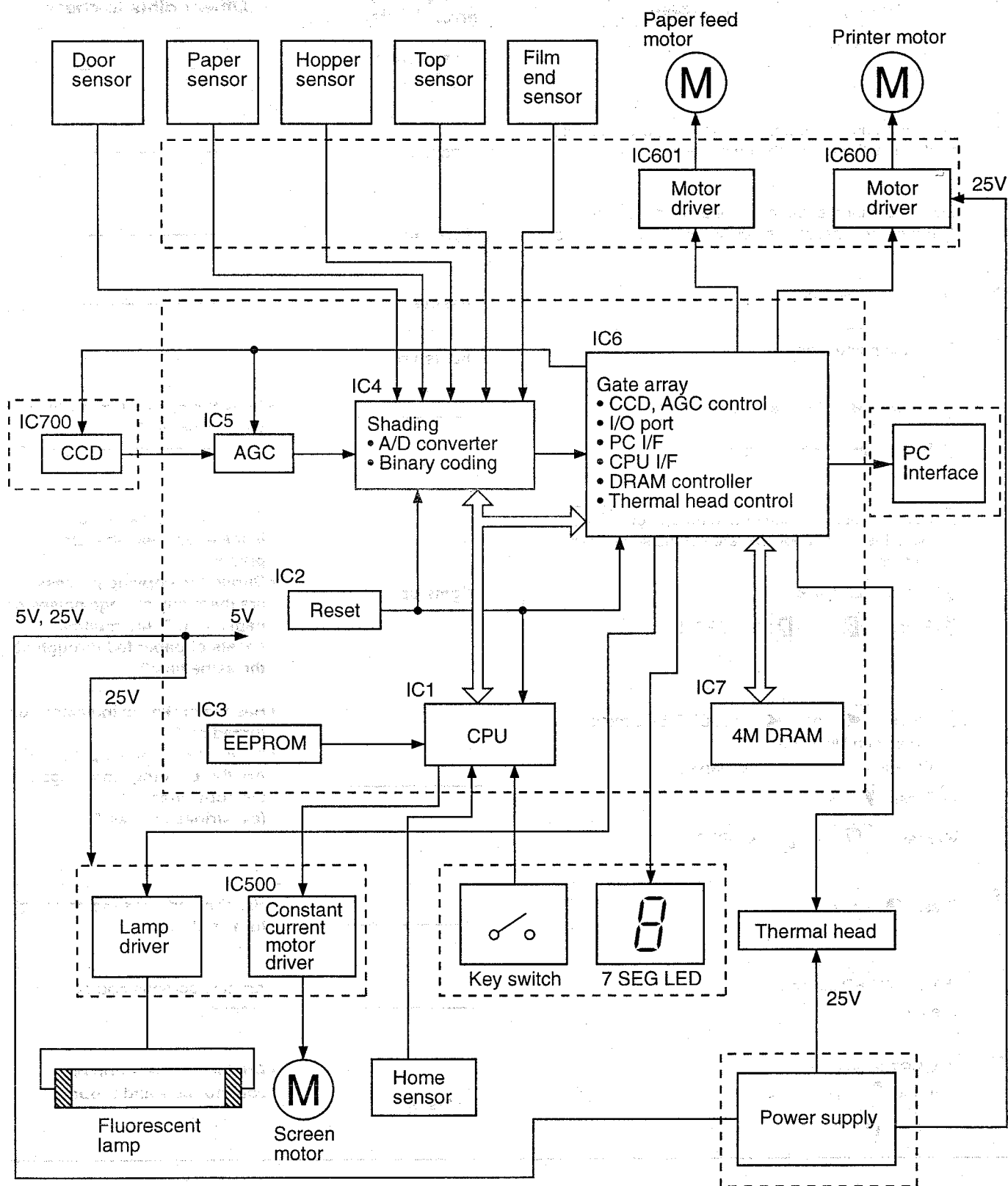
## 4.6 After Installing

After assembling the print board, installing Thermal Transfer Film, and Loading Copy Paper, perform the procedures shown in the following table to make sure it works properly.

Step		Normal print board operations (points to check)	
		Multiple copy/ error display	Other points to check
1	Turn on the power switch.	"r" flashes after "0" lights up.	_____
2	Open the printer unit and attach the supplied thermal transfer film, then close the printer unit.	"P" flashes.	_____
3	Open the paper feeder cover and insert ordinary A4(Letter) test paper, then close the paper feed cover.	"1" lights up.	_____
4	Open the printer door.	"d" flashes.	_____
5	Close the printer door.	"1" lights up.	_____
6	① Press  or  (KX-BP735). ② Press  (KX-BP735 only).	_____ _____	<ul style="list-style-type: none"> <li>• Does the screen film surface feed smoothly?</li> <li>• Are there any strange noises?</li> </ul>
7	① Use the supplied marker to draw a large  filling the entire copyable area of the screen film surface. ② Press  twice. ③ Press  or  (KX-BP735).	"3" lights up.	<ul style="list-style-type: none"> <li>• Are there copies made?</li> <li>• Is the entire readable area printed?</li> <li>• During the copying process, are there any strange noises or paper jams? Are multiple sheets of paper fed through at the same time?</li> </ul>
8	① Press  or  (KX-BP735) to move the screen film surface. Write letters, etc, with the marker. ② Press  once. ③ Press  or  (KX-BP735).	_____	<ul style="list-style-type: none"> <li>• Has the darkness indicator light turned on?</li> <li>• Is the image copied properly?</li> <li>• Are there strange markings on the copy sheet (ex. stripes or lines)?</li> </ul>
9	Press  once.	_____	<ul style="list-style-type: none"> <li>• Has the darkness indicator light turned off?</li> </ul>
10	(KX-BP535/BP635 only) Press  .	_____	<ul style="list-style-type: none"> <li>• Are two screens copied properly?</li> </ul>
11	(KX-BP735 only) ① Press  nine times. ② Press  .	"11" lights up.	<ul style="list-style-type: none"> <li>• Are four screens copied continuously and properly?</li> </ul>

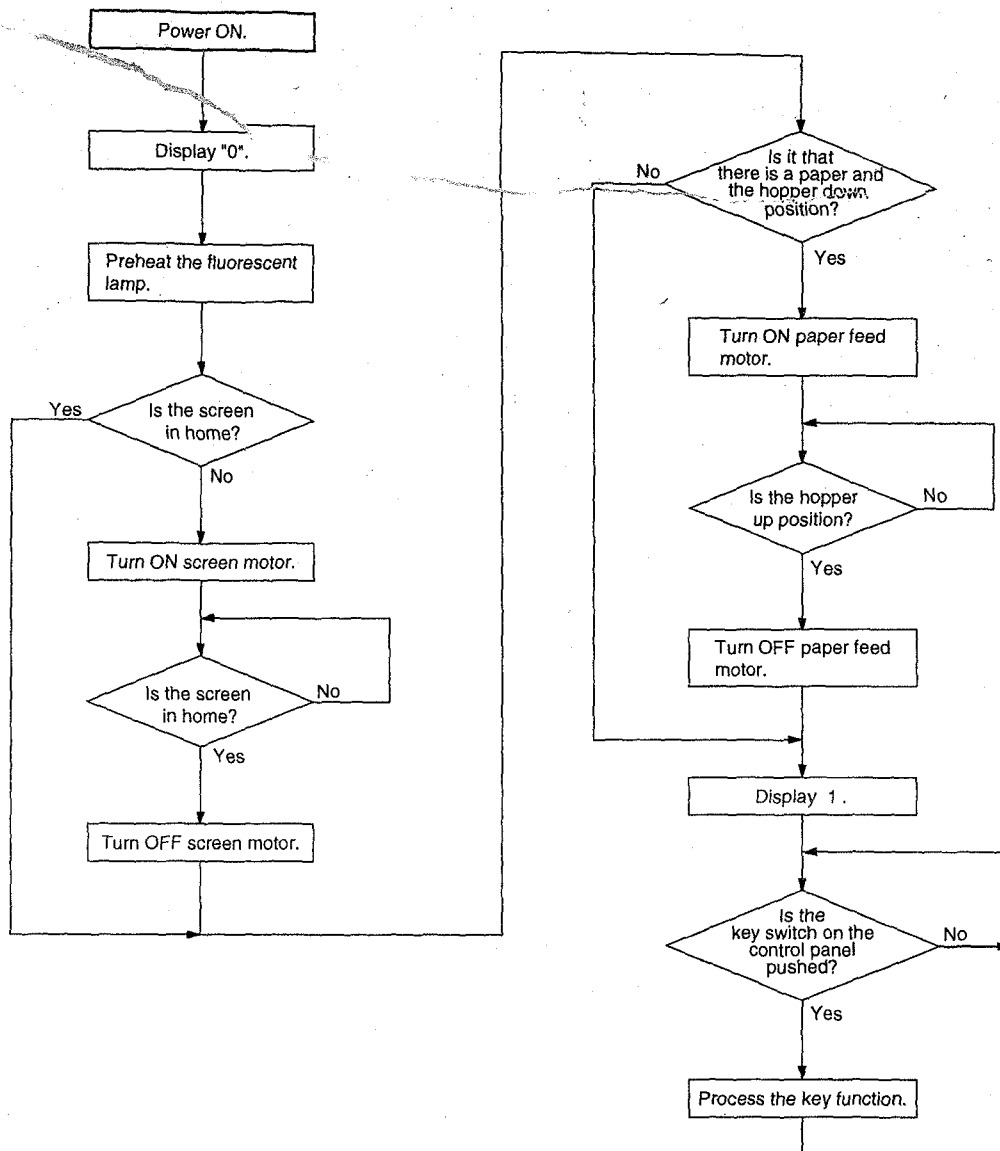
## SECTION 5

## 5.1 Block Diagram

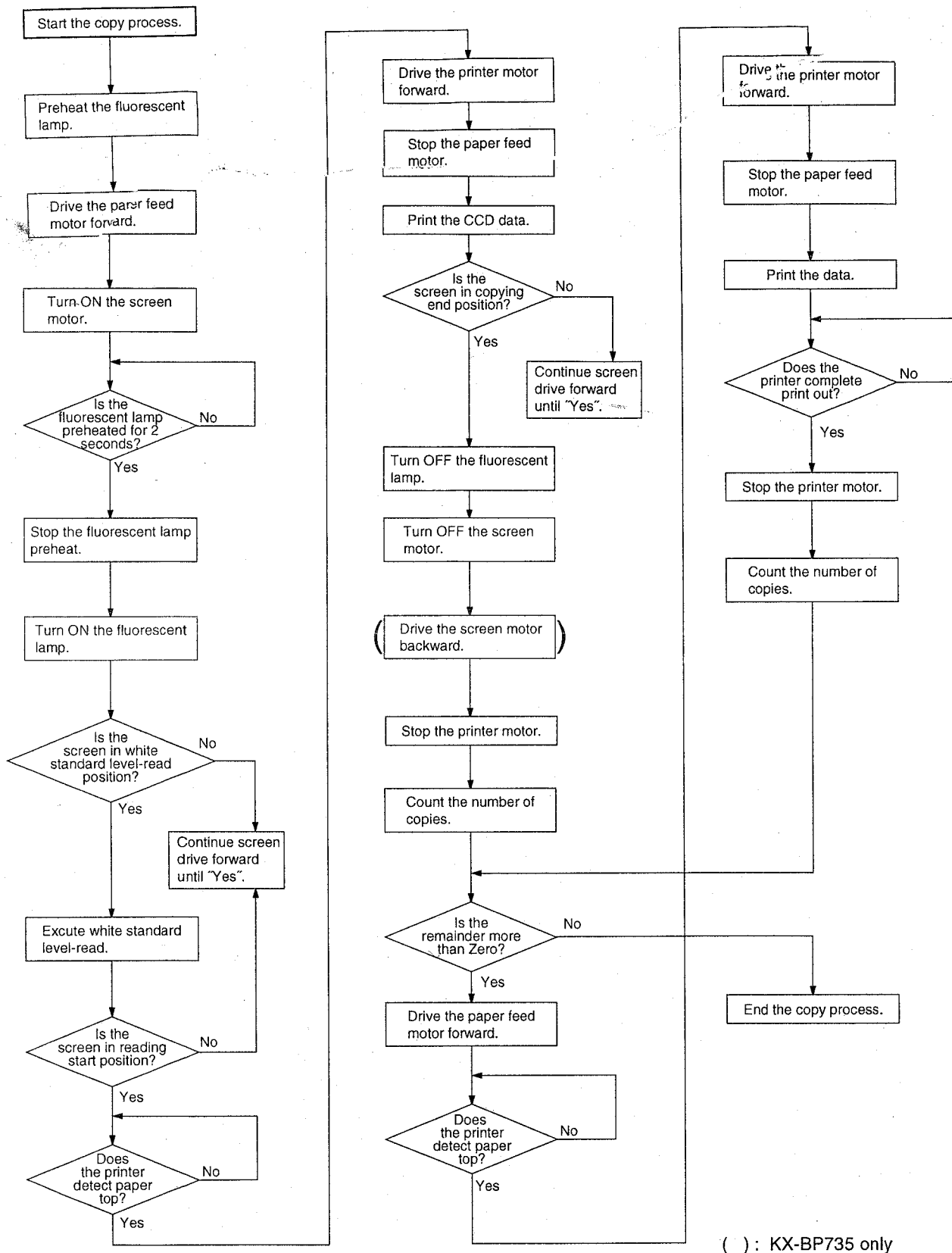


## 5.2 Flowchart

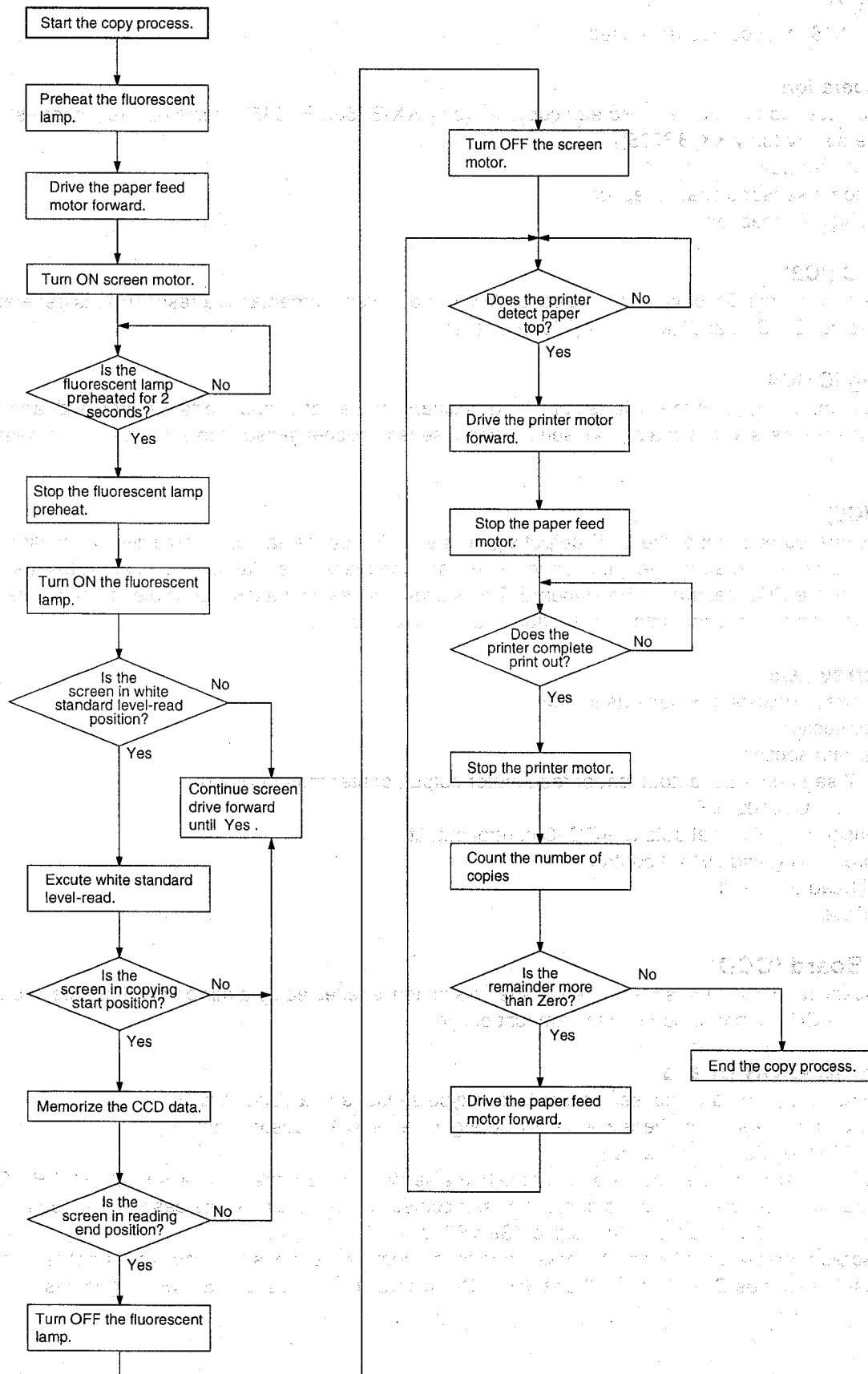
### 5.2.1 Initial Check



## 5.2.2 Copy



### 5.2.3 2-Screen copy (KX-BP535, KX-BP635)



## **5.3 Explanation of Functions**

### **5.3.1 SUB Board**

#### **(1) CPU (IC1)**

An 8 bit CMOS microcomputer is used.

##### **Circuit operation**

- Key input reception (copy key, 2-screen copy key (only KX-BP535/BP635), multi-copy key, contrast key, advance key, reverse key (only KX-BP735))
- EEPROM interface
- Screen home sensor signal reception
- Interrupt signal reception

#### **(2) Reset IC (IC2)**

When the power turns ON or when the power supply is interrupted momentarily, a reset pulse is generated, and CPU (IC1), shading IC (IC4), and gate array (IC6) are reset.

#### **(3) Shading IC (IC4)**

The analog image signal of the CCD is converted to binary image data. Input ports are provided, and the signals of the various sensors' status signals (door sensor, paper sensor, hopper sensor, top sensor, film end sensor) are given as input.

#### **(4) AGC (IC5)**

Only the signal component of the CCD output signal is sampled by the sample & hold circuit, amplitude adjustment for this signal is performed by the gain control circuit, and the black level clamp circuit generates a signal with the black level of the CCD sensor as the standard. This signal processing makes it possible to cancel the scatter of the CCD sensor, the fluorescent lamp light scatter, and the ageing scatter.

#### **(5) Gate array (IC6)**

The gate array consists of 8 parts as follows.

- Oscillator section
- Address data section
- I/O port (7-segment LED output, paper feed motor output, printer motor output)
- Shading IC (LC82102) I/F
- CCD sensor control signal output, AGC IC control output
- Image processing and DRAM control
- Thermal head printer I/F
- PC Interface

### **5.3.2 MAIN Board (CCD)**

The fluorescent lamp illuminates the screen image, this image is reflected by a mirror, and it enters into the CCD. The output from the CCD is proportional to the amount of light.

### **5.3.3 HOME SENSOR Board**

The screen home sensor is composed of a reflection-type sensor and a buffer circuit.

At the lower part of the screen, there are two black origin marks which absorb light.  
(The KX-BP735 has four origin marks.)

When the origin marks of the screen are not at the home sensor position, the light sensor "ON2172R" IC300 receives light reflected from the screen, and the phototransistor comes ON. Accordingly, the base of the transistor Q300 goes OFF with less than 0.6 V, and the output signal "SENST" becomes "H" (5 V).

When the screen rotates and the origin marks come to the home sensor position, the light is not reflected, the phototransistor becomes OFF, and Q300 becomes ON. Accordingly, the output "SENST" becomes "L" (0 V).

### **5.3.4 MOTOR DRIVER Board**

This drives the stepping motor for platen roller and pick-up roller.

### **5.3.5 LAMP DRIVER Board**

The control signal for the lamp drive circuit is sent from the shading IC(IC4).

The lamp driver lights the fluorescent lamp with a high frequency to prevent flickering. In order to reduce blackening, the filament is preheated immediately before it turns ON. The constant current motor driver (IC500), which drives the stepping motor for screen feed, also is on this circuit board.

### **5.3.6 POWER Board**

Supply of electric power (5 V, 25 V)

### **5.3.7 PANEL Board**

This includes the 7-segment LED (multi-copy/error indicator), LED (contrast indicator), and the display for the five keys (copy, advance, contrast, multi-copy/stop, 2-screen copy key (reverse key in case of the KX-BP735)).

### **5.3.8 SENSOR Board**

#### **Explanation of the mechanical operation (Refer to Fig. 1)**

#### **PAPER SENSOR**

The paper sensor lever and board are used to check whether paper exists or not in the paper supply section.

When there is no paper, the paper feed motor pushes the hopper down and paper can be loaded.

When paper is loaded, the hopper is pushed up, the paper is pressed to the pick-up roller, and paper can be fed.

#### **HOPPER SENSOR**

This sensor detects whether the hopper is down or up.

#### **FILM END SENSOR**

The remaining film quantity is detected by an encoder.

When the remaining quantity becomes a little, the density LED starts to flash.

When there is no film to print, the error "r" is indicated.

#### **TOP SENSOR**

This sensor detects the leading edge of the paper at the time of transport. After completion of printing, it detects whether the paper has left or not to judge whether a jam has occurred or not. "J" is displayed when jamming occurs.

#### **DOOR SENSOR**

This sensor detects whether the printer door is open or closed.

The error "d" is displayed when the door is open.

#### **PAPER FEED MOTOR**

Depending on the rotation direction, this motor moves the hopper up and down or drives the pick-up roller.

#### **PRINTER MOTOR**

This motor drives the platen roller and the transfer film.

#### **Copy operation**

When the copy switch on the operation panel is pressed, the paper feed motor drives the pick-up roller and paper is fed.

The leading edge of the paper being fed pushes the top sensor lever, and so the top sensor board detects the leading edge of the paper. And when the pick-up roller has transported the paper for the distance from the top sensor position to the platen, the printer motor drives the platen roller and the transfer film, and the paper is clamped between the thermal head and film on one side and the platen roller on the other side, and from here on it is transported by the platen roller. At this time, the film ink melted by the heat of the thermal head is transferred to the paper and the information on screen is printed.

5.4 Mechanism for Copy Function

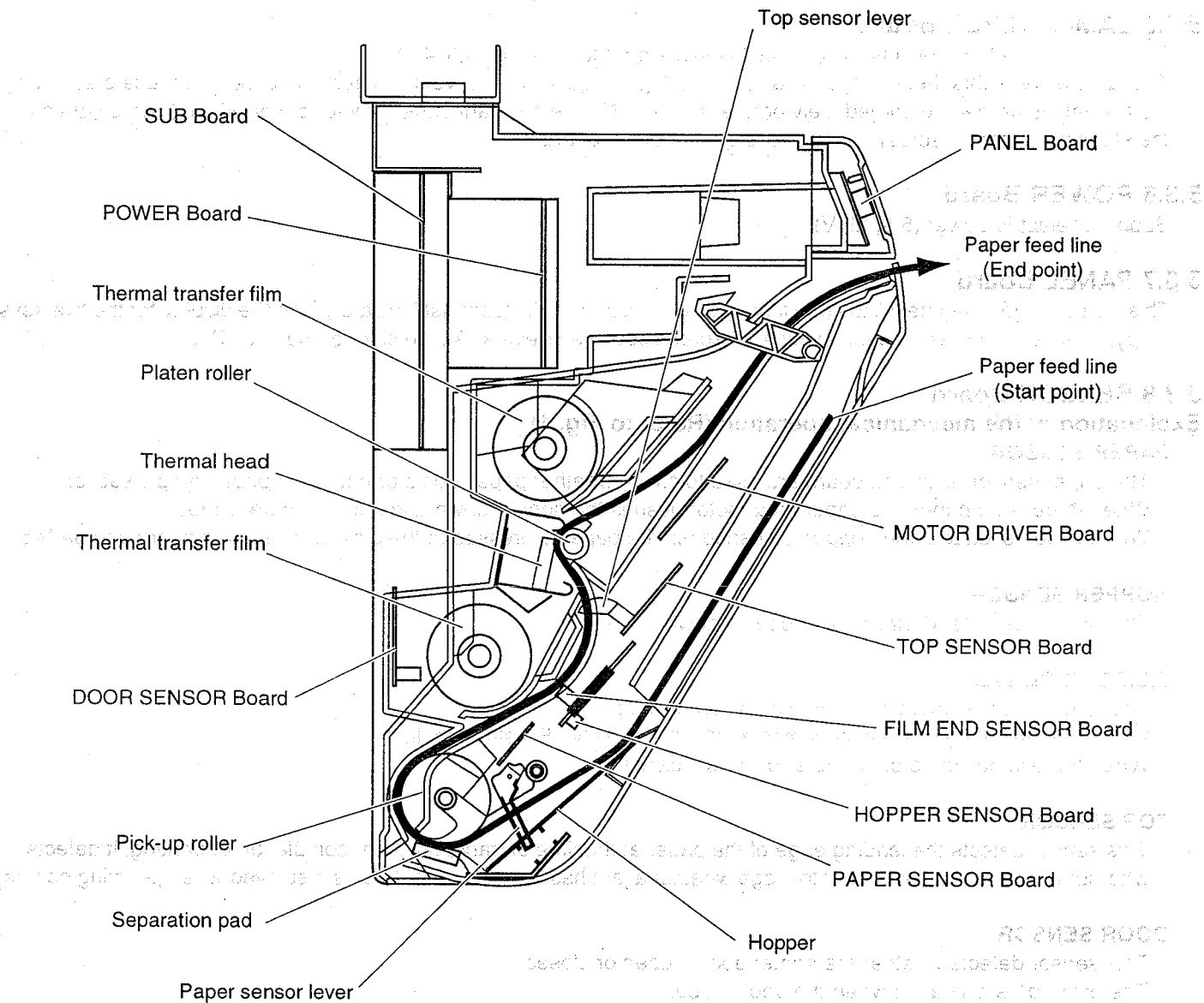


Fig. 1



## SECTION 6

### MAINTENANCE

#### 6.1 Replacing Thermal Transfer Film

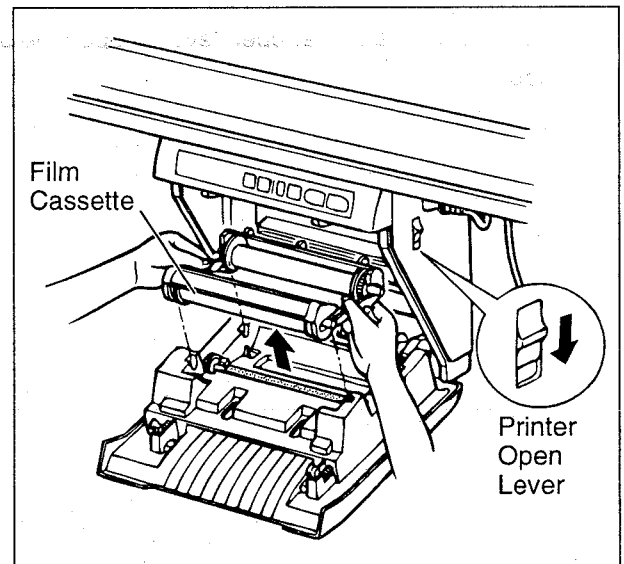
The unit is capable of printing about 15 copies when the Contrast/Remaining Film Indicator begins to flash.

The unit has run out of thermal transfer film and can no longer make copies when the Multi-Copy/Error Indicator flashes "E". Thermal transfer film is replaced as follows.

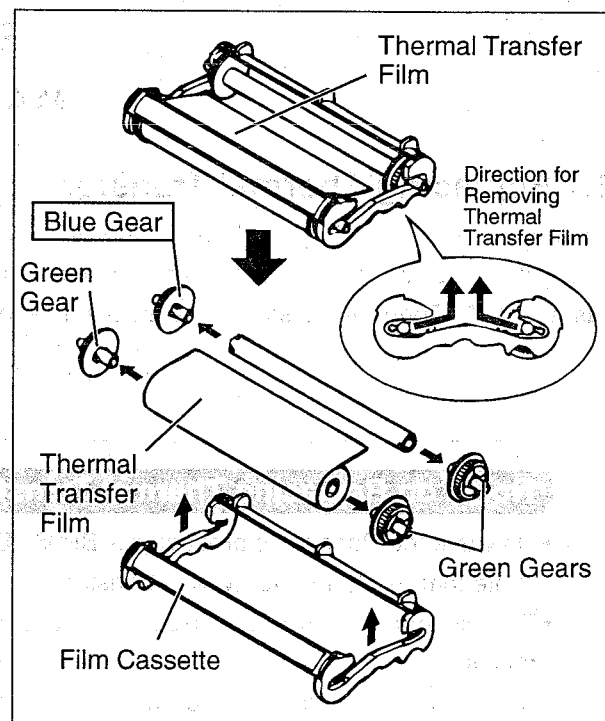
##### Notes on Replacing Thermal Transfer Film

- Only use the Panasonic product (KX-BP081/BP082) as replacement.  
(Note that using another type of transfer film may result in degraded printing quality or damage to the unit.)
- Thermal transfer film is disposable. Dispose of used thermal transfer film as "burnable" or "non-recyclable" rubbish.
- A negative of the copied image will remain on the thermal transfer film. To protect the security of your information, we recommend cutting up used thermal transfer film with scissors before disposing of it.

1. Push down the printer open lever to open the printer door, and remove the film cassette with both hands.



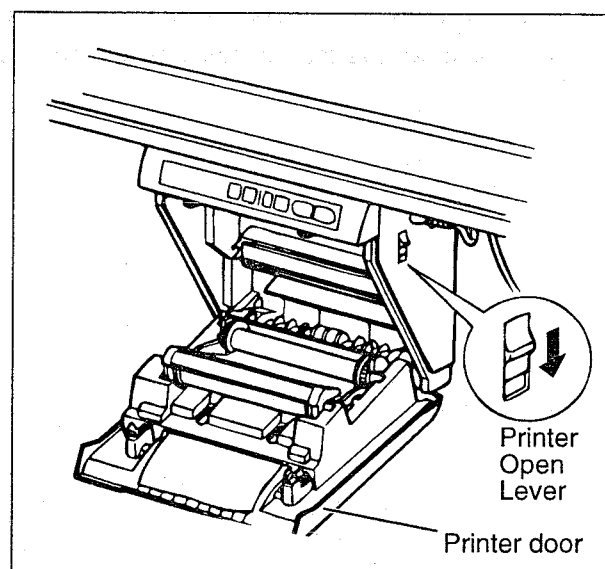
2. Remove the used thermal transfer film from the film cassette and remove the four gears.
3. Attach a new film as shown in "4.4 Installing Thermal Transfer Film."



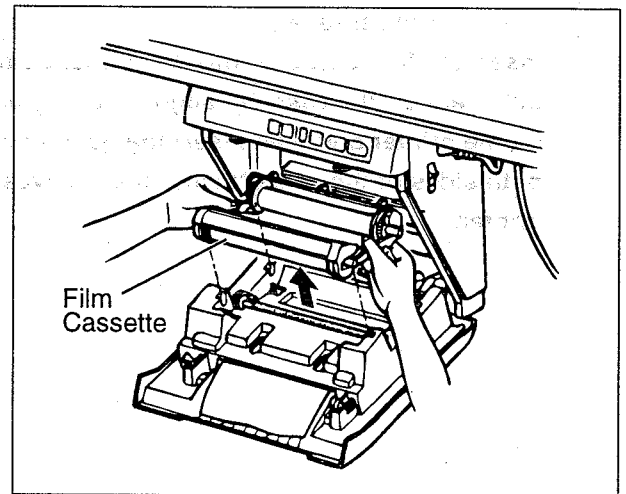
## 6.2 Paper Jams

Remove paper jams by the following procedure when copy paper does not come out of the output port or when "U" flashes on the multi-copy/error display indicator.

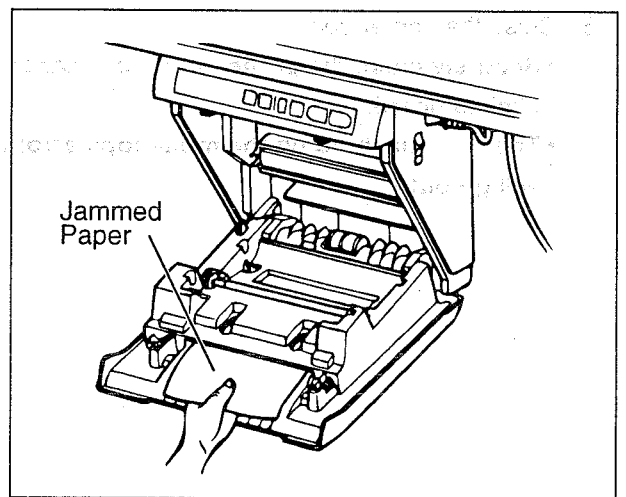
1. Push down the printer open lever to open the printer door.



2. Remove the film cassette with both hands.

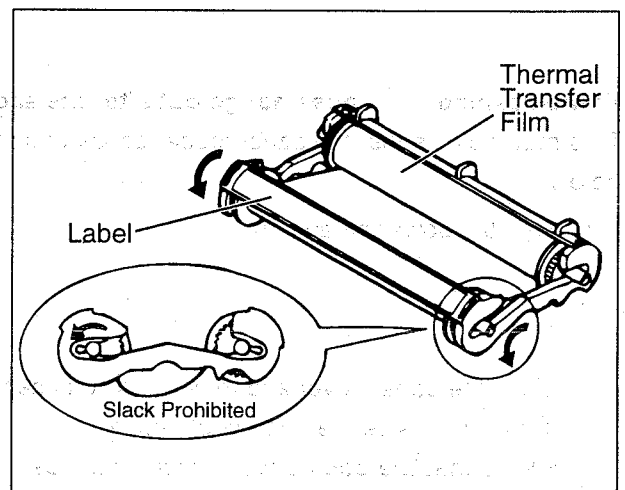


3. Remove all jammed paper.



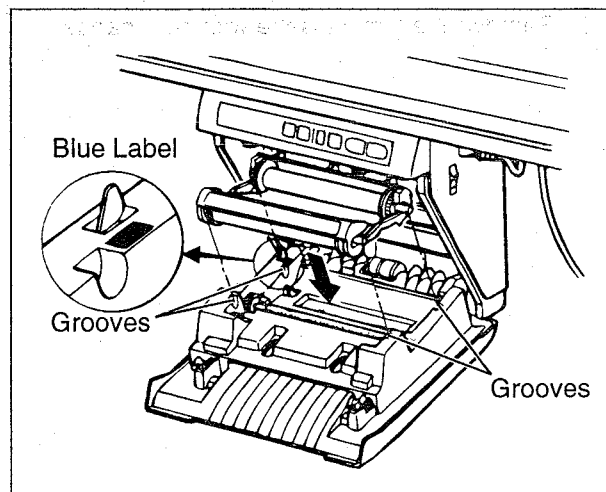
4. If the thermal transfer film is loose, take up the looseness by winding the gears on the label side of the cassette in the direction of the arrows.

- The multi-copy/error indicator may flash "E" if the thermal transfer film is loose. In addition, the thermal transfer film may wrinkle, and blank (unprinted) spots or black streaks may appear on the copy paper.



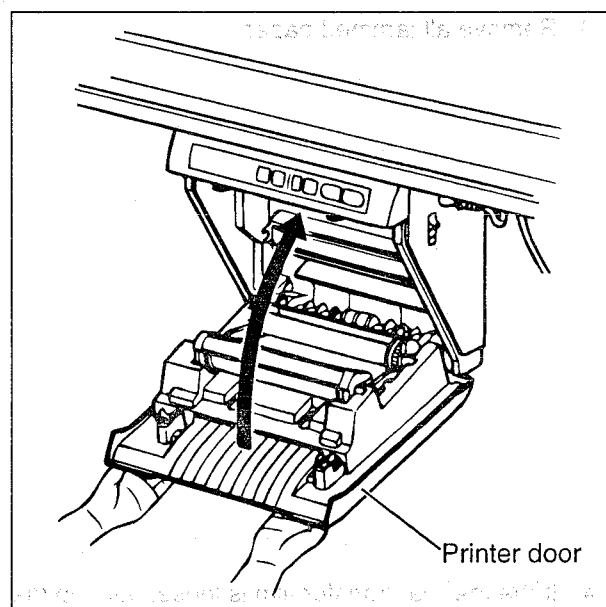
5. Install the film cassette.

- Insert the film cassette into the printer so that the blue gear on the cassette aligns with the blue label on the printer and then insert the gear shafts on both sides of the cassette into the grooves on the printer.



6. Close the printer door.

- Securely close the printer with both hands until a click is heard.
- The " " flashing on the multi-copy/error indicator will go out.



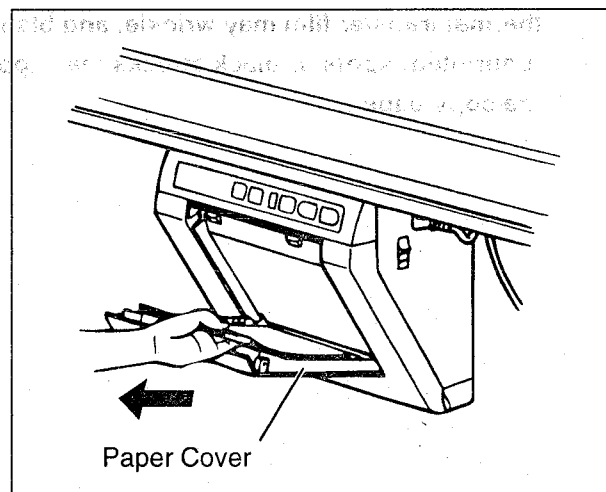
•If the flashing " " does not go out after the above procedure has been performed;

This may indicate that the paper feeder does not operate properly. Reload the copy paper by following the steps given below.

1. Turn the power off and on.

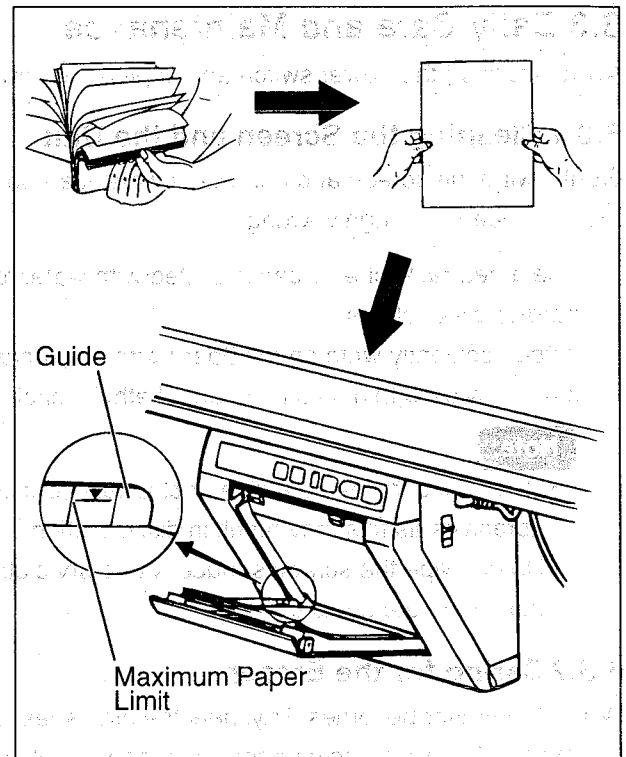
2. Open the paper cover and remove all copy paper remaining inside the unit's paper cover.

- Note that the copy paper will slightly resist being removed, but may be pulled out without problems.

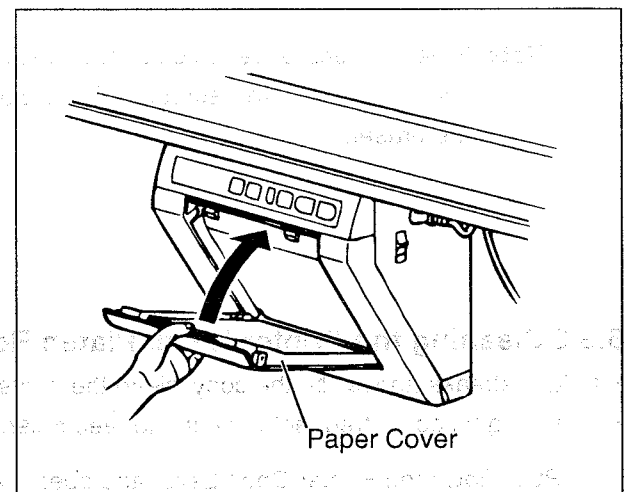


3. To prevent paper jams such as those caused by double feeding at once, fan the paper thoroughly, square it, align it with the guide inside, and insert as far as it will go.

**Note:** Do not stack copy paper in the unit beyond the maximum paper limit indicated by the guide (see figure to the right) as this may result in paper jams. (Note that the unit can hold about 80 sheets of paper having a weight of 80g/m<sup>2</sup>.)



4. Close the paper cover.



## **6.3 Daily Care and Maintenance**

Always turn off the power switch and unplug the power plug when cleaning outside and inside the unit.

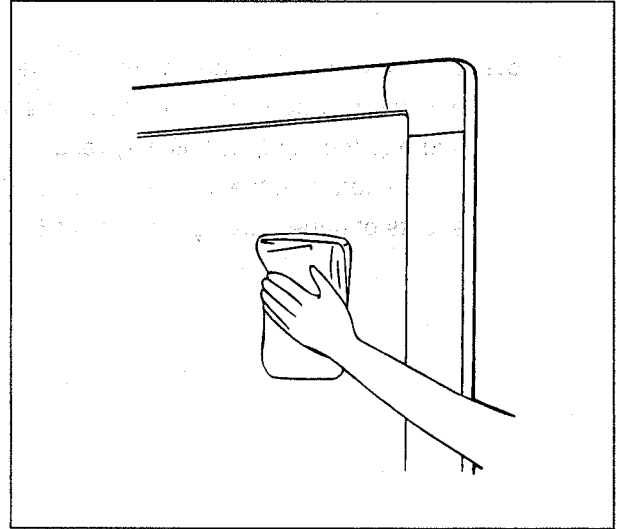
### **6.3.1 Cleaning the Screen and the Unit**

Gently wipe the screen and unit with a water-dampened cloth that has been thoroughly wrung.

Use a neutral kitchen cleaner diluted with water for hard-to-clean stains.  
If you accidentally write on the board with an oil-based marker, wipe with a small amount of ethyl alcohol.

**Note:**

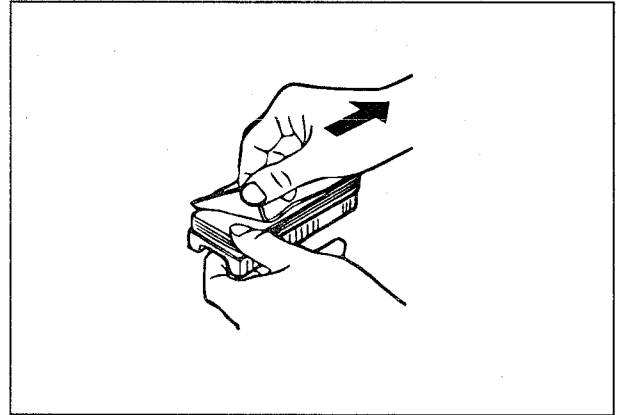
- Do not use thinner, benzine or cleaners containing abrasives as this may result in discoloration.
- Do not wipe the screen surface with a dry cloth as this may generate a static charge.



### **6.3.2 Caring for the Eraser**

When the eraser becomes dirty, peel the dirty sheet off to the direction of the arrow, holding the lower sheets with your thumb.

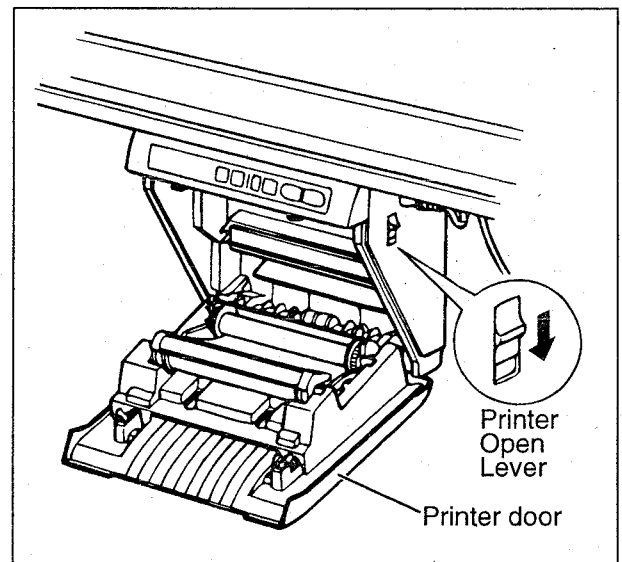
**Note:** When the eraser becomes thin, be careful not to scratch Panaboard's screen with the edges of the eraser.



### **6.3.3 Cleaning the Printer Head, Platen Roller and Feed Roller**

- If black streaks appear on the copy, clean the printer head and the platen roller.
- If paper jams occur frequently, clean the feed roller.

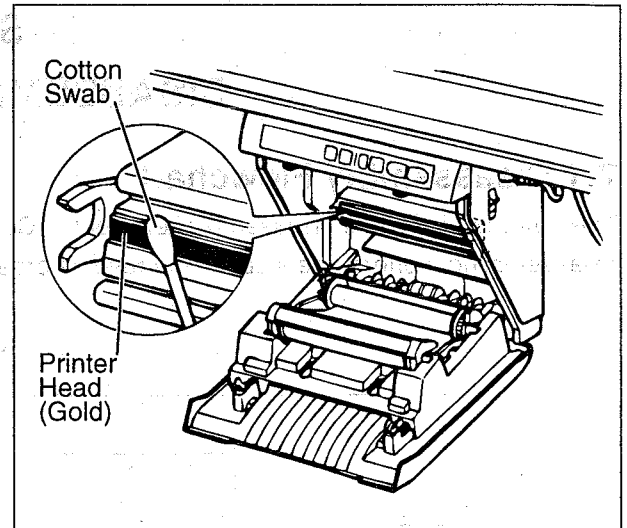
1. Push down the Printer Open Lever and open the printer door.



### Clean the Printer Head

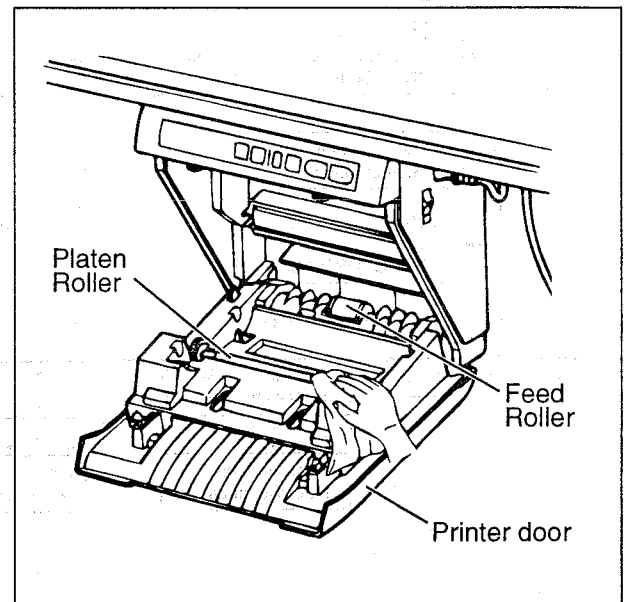
2. Wipe gently with a cotton swab, dipped in ethyl alcohol.

**Note:** Never touch the printer head and/or the surrounding area with your hands. Otherwise, this may disable copying.



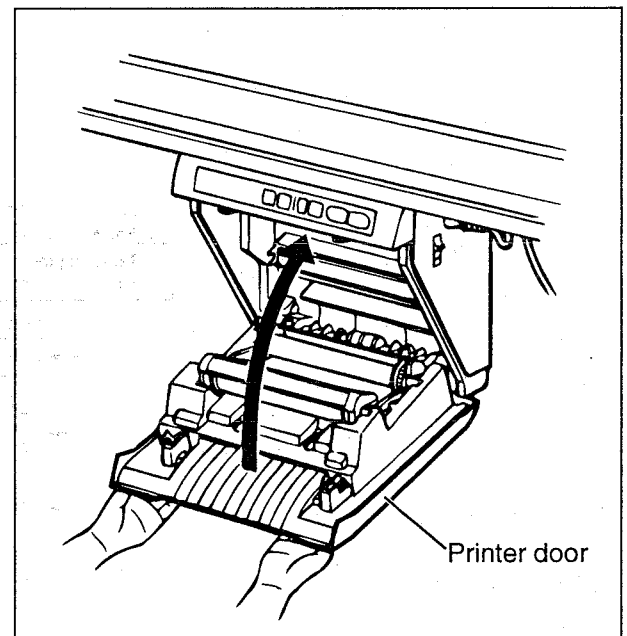
### Clean the Platen Roller and the Feed Roller

3. After removing the film cassette with both hands, carefully wipe any dirt or stains off the platen roller and feed roller.
  - Regarding to removing the film cassette in detail, see page 6-1.
  - After dipping a soft cloth in neutral kitchen cleaner diluted with water, and wringing the cloth thoroughly, wipe the entire surface of the rollers carefully. If this is not effective, wipe with a cloth dipped in sterilizing ethanol.



4. Attach the film cassette in its original position and close the printer door.
  - For details on attaching the film cassette, see page 4-16, Installing Thermal Transfer Film.
  - Close the printer firmly until a click is heard.

**Note:** If "E" is displayed on the multi-copy/error indicator when the power is turned on, this indicates that the film cassette has not been installed properly or that there is looseness in the thermal transfer film. Check the condition of the film cassette and for looseness in the thermal transfer film.



# SECTION 7

## DISASSEMBLY INSTRUCTIONS

### 7.1 Disassembly Flowchart

The flowchart indicates disassembly items of the Covers, Unit Components and Circuit Board assemblies. When re-assembling, perform the steps in the reverse order unless otherwise noted in Re-assembling Notes.

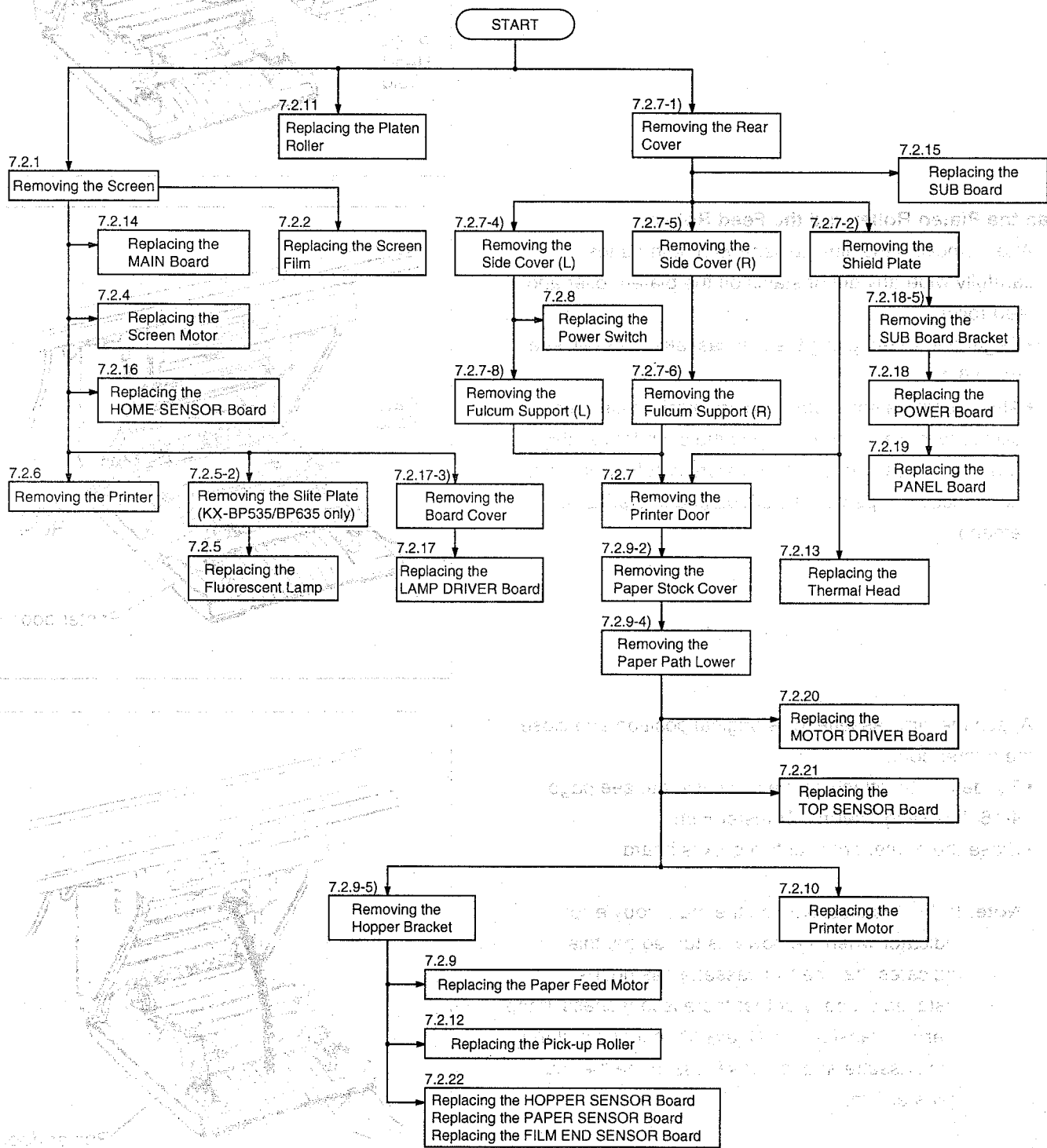


Fig. 8-1



## 7.2 Disassembly Procedures

### 7.2.1 Removing the Screen

#### – For KX-BP535 and KX-BP635 –

##### – If the print board is mounted on the optional stand –

- 1) Remove 6 wing bolts.
- 2) Slide the two screen unit holders to the left.

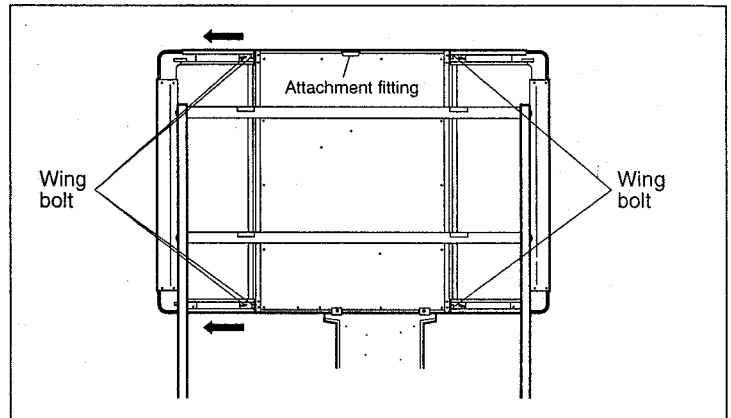


Fig. 7-2

- 3) Pull the bottom of the screen toward you, and lift the screen.

**Note:** By pulling the bottom of the screen away from the scanner/printer, the guide pin is disengaged.

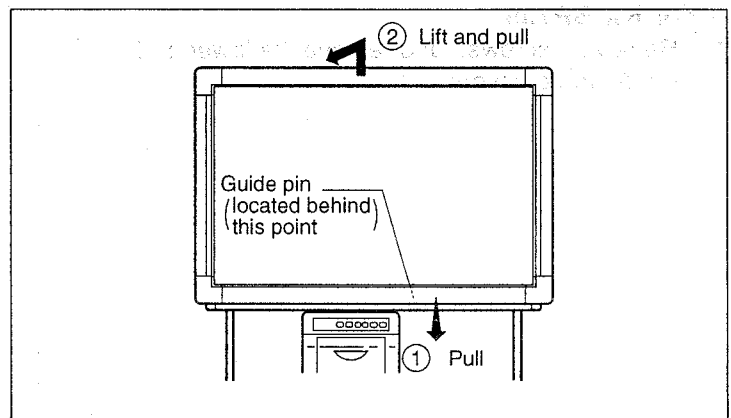


Fig. 7-3

##### – If the print board is mounted on the wall –

- 1) Remove 2 wing bolts, and remove the lower and upper frame covers.

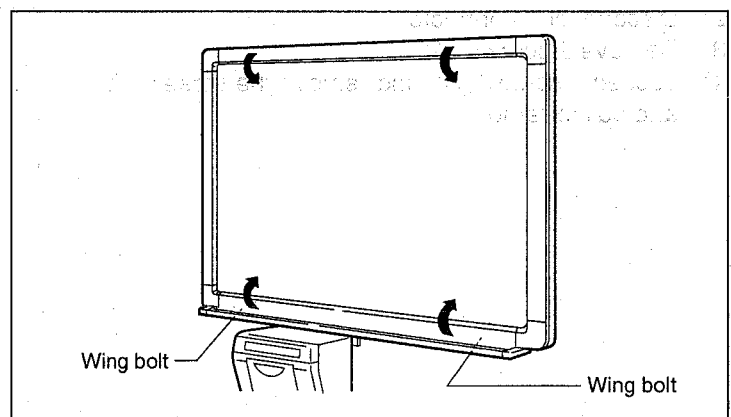
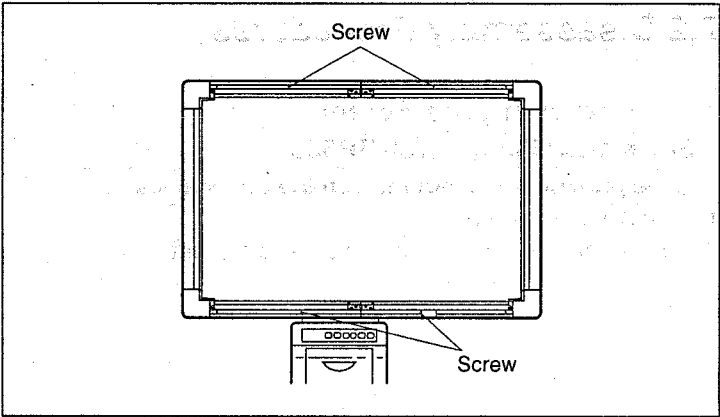


Fig. 7-4

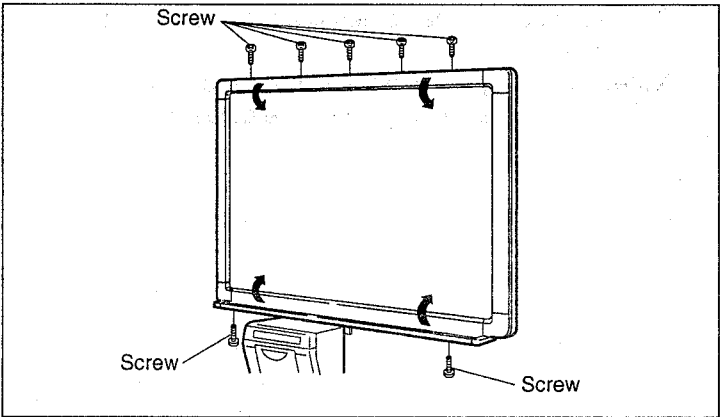
- 2) Remove 4 screws, and remove the screen (lift and pull to remove).



**Fig. 7-5**

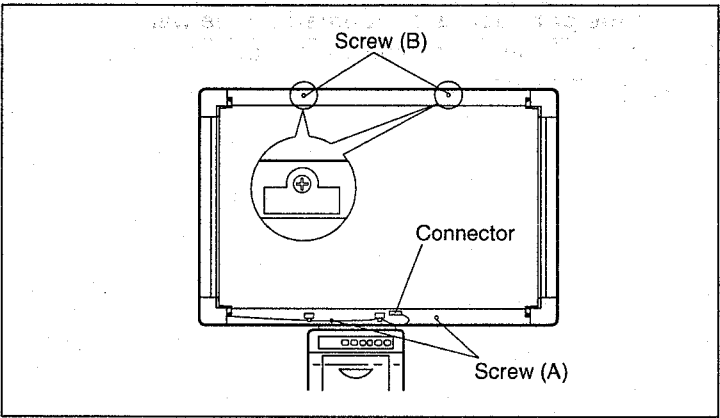
**– For KX-BP735 –**

- 1) Remove 7 screws, and remove the lower and upper frame covers.



**Fig. 7-6**

- 2) Disconnect 1 connector.
- 3) Remove 2 screws (A).
- 4) Loosen 2 screws (B), and remove the screen (lift and pull to remove).



**Fig. 7-7**

## 7.2.2 Replacing the Screen Film

### – For KX-BP535 and KX-BP635 –

- 1) Remove the screen (See 7.2.1).  
**Note:** If the print board is mounted on the optional stand, remove the upper, and lower frame covers as shown in Fig. 7-4.
- 2) Remove 8 screws (A), and remove the rear covers with the attachments.
- 3) Remove 2 screws (B), and remove 2 screen fittings.
- 4) Remove 8 screws (C).

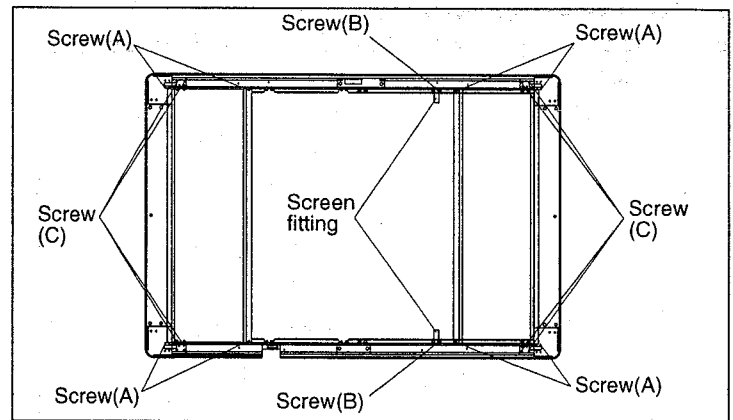


Fig. 7-8

- 5) Remove 4 screws, and remove the Frame covers with the corner frame cover attachments.

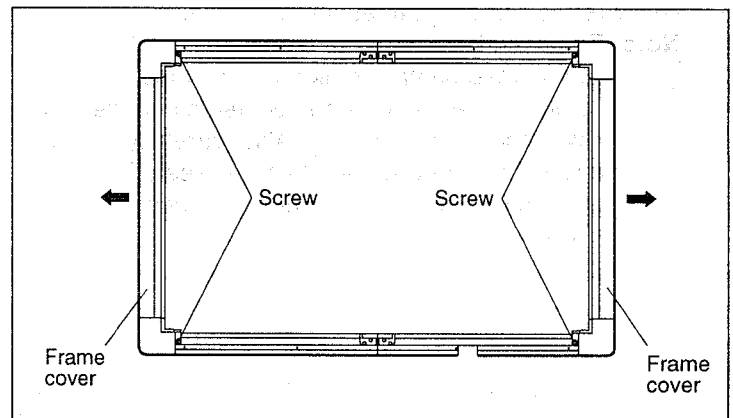


Fig. 7-9

- 6) Unhook 2 tension springs.

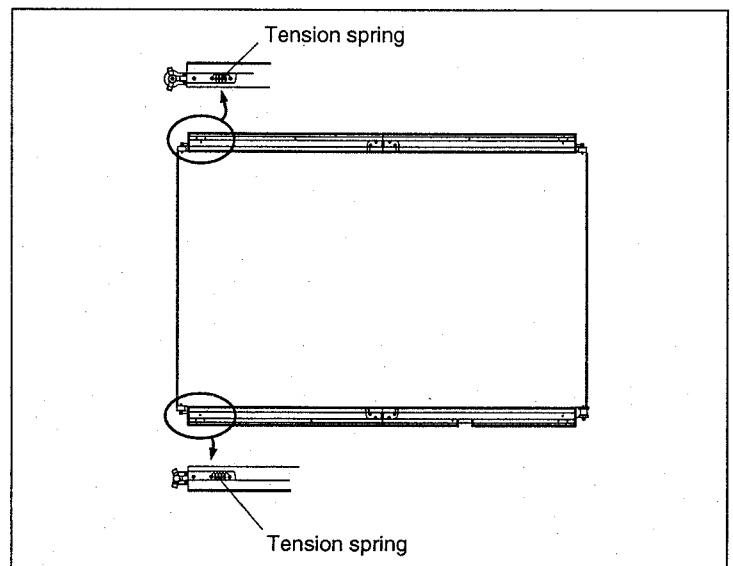
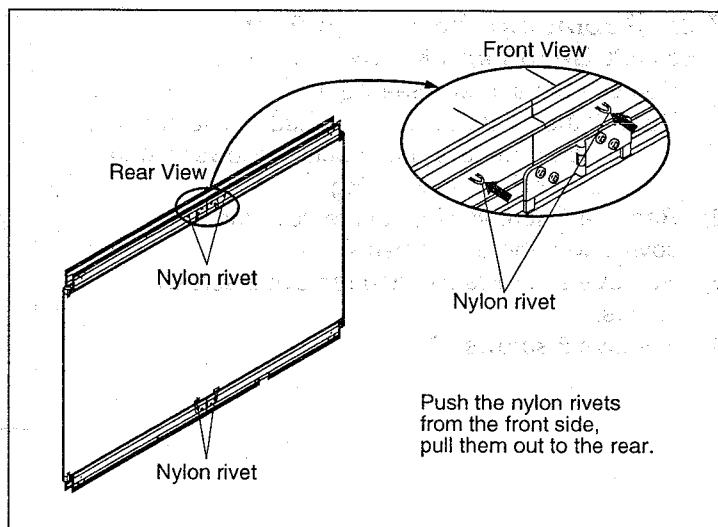


Fig. 7-10

- 7) Remove 4 nylon rivets.
- 8) Slide upper and lower panel slide plate, then fold the screen.

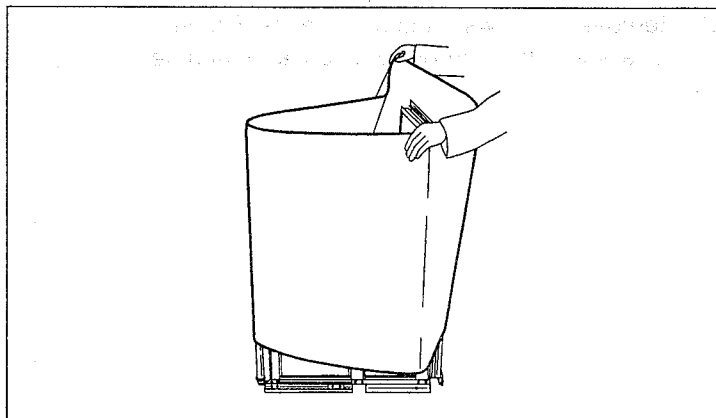


**Fig. 7-11**

- 9) Remove the screen (film) as shown in Fig. 7-12.

**Note:** Re-assemble in reverse order.

During re-assembly, make sure that the screen home markers are located along the lower edge of the screen. Also, carefully position the new screen (film) between the drive rolls and screen holders on each corner.



**Fig. 7-12**

– For KX-BP735 –

- 1) Remove 7 screws, and remove the lower and upper frame covers (See Fig. 7-6).
- 2) Disconnect 1 connector.
- 3) Remove 2 screws (A) and 4 screws (B), and remove the frame cover (L) with the corner frame cover attachments.
- 4) Remove 2 screws (a) and 4 screws (b), and remove the frame cover (R) with the corner frame cover attachments.
- 5) Loosen 2 screws (C) and remove 2 screws (D).

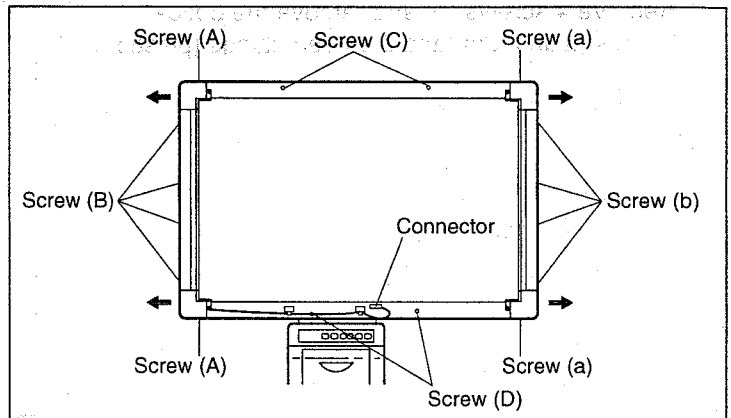


Fig. 7-13

- 6) Remove 8 screws (E), and remove the rear covers.

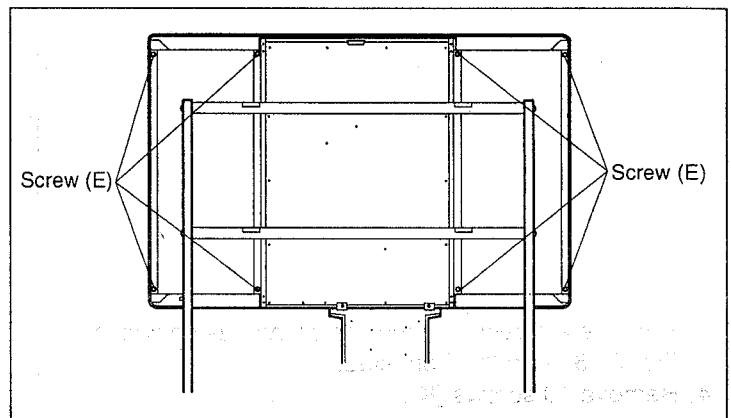


Fig. 7-14

- 7) Remove 4 screws (F), and remove gear cover plates.
  - 8) Remove 4 stud-screws (G).
  - 9) Remove 4 stud-screws (H), and screw them to the holes respectively.
  - 10) Remove the screen from the optical unit, and place it onto a flat surface.
- Note:** Place face down (rear upwards).

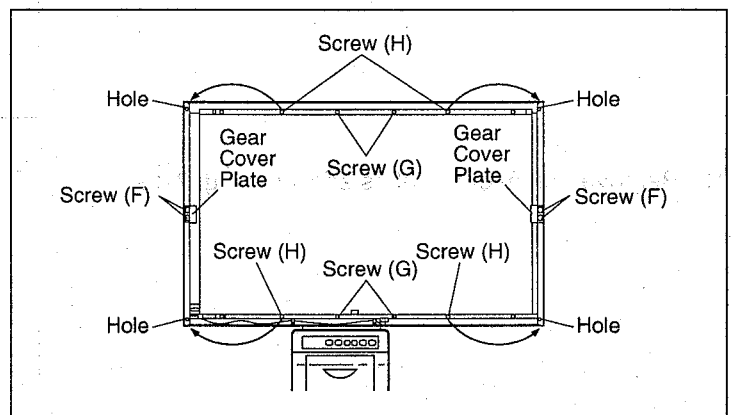
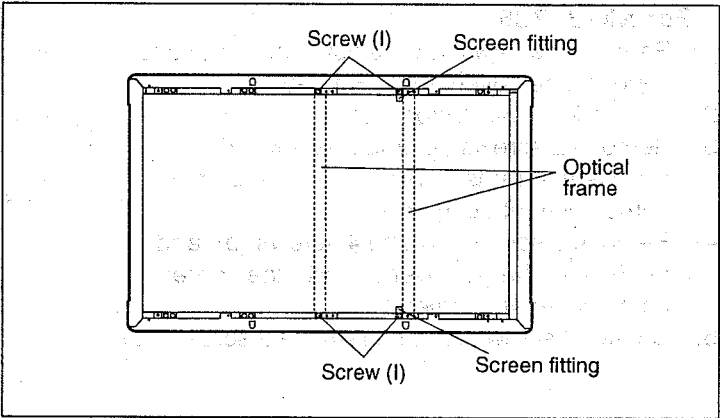


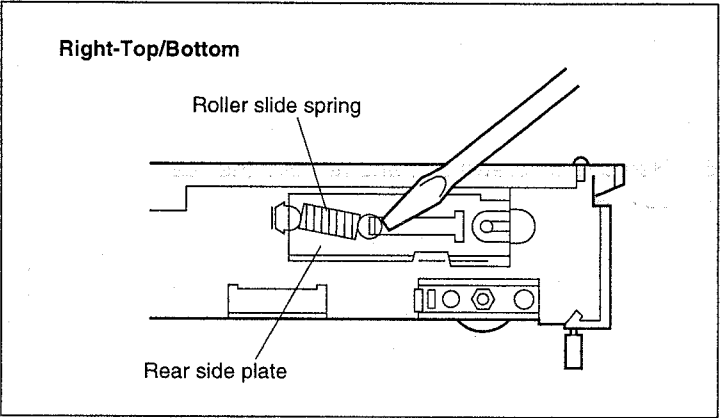
Fig. 7-15

- 11) Remove 4 screws (I), and remove the optical frames (aluminum) and 2 screen fittings (plastic).



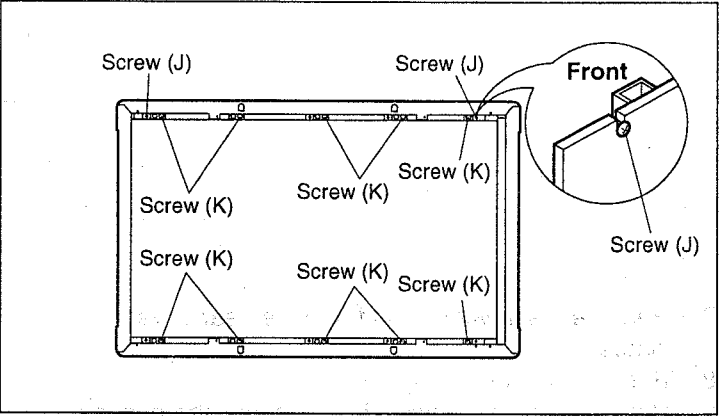
**Fig. 7-16**

- 12) Unhook the roller slide springs (using a flat-blade screwdriver), and remove the roller slide plates.



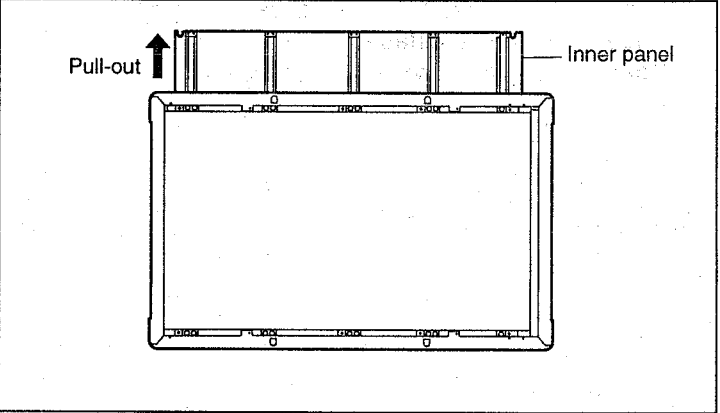
**Fig. 7-17**

- 13) Remove 2 screws (J) and the collars, as shown in Fig. 7-18, from the front side.  
14) Remove 10 screws (K).



**Fig. 7-18**

- 15) Remove the inner panel as shown in Fig. 7-19.



**Fig. 7-19**

- 16) Remove 1 screw (L), 1 nut and the roller fastening plate, and remove the roller.
- 17) Remove 1 screw (M), 1 nut and the roller fastening plate, and remove the main roller.

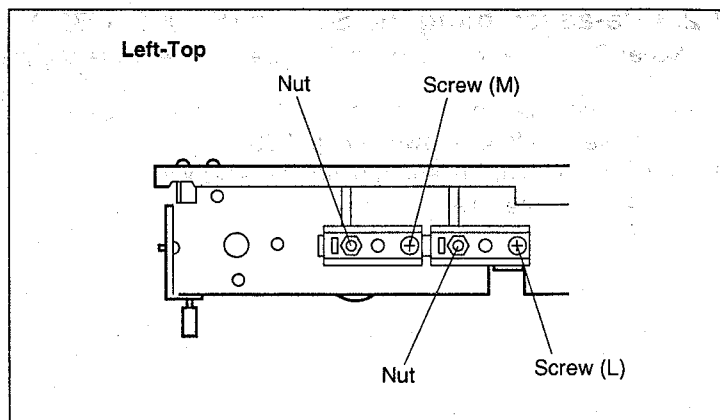


Fig. 7-20

- 18) Unhook the roller shaft, and remove the roller.
- 19) Remove 1 screw (N), 1 nut and the roller fastening plate.

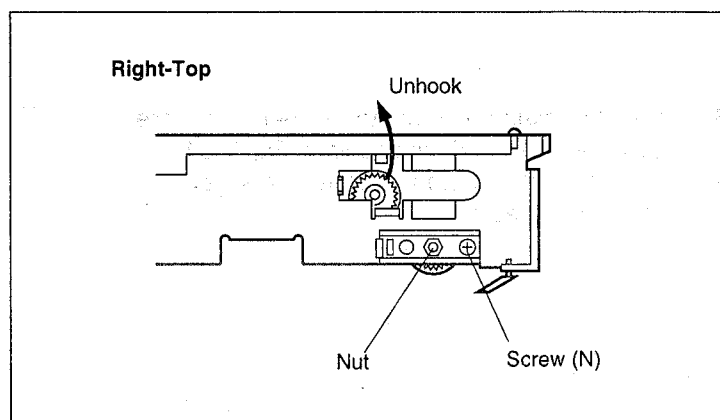


Fig. 7-21

- 20) Unhook the roller shaft with the screen (film).  
**Note:** When re-assembling, refer to 7.2.3 re-assembling the screen.

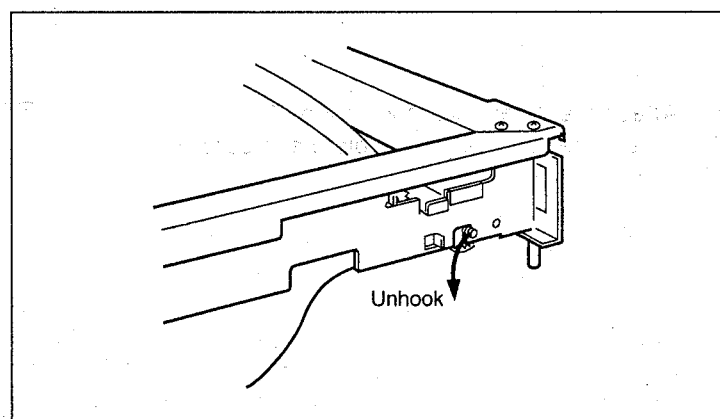
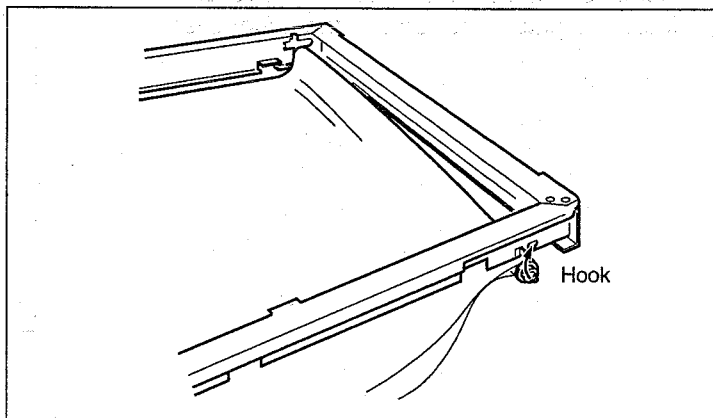


Fig. 7-22

### 7.2.3 Re-assembling the Screen (For KX-BP735)

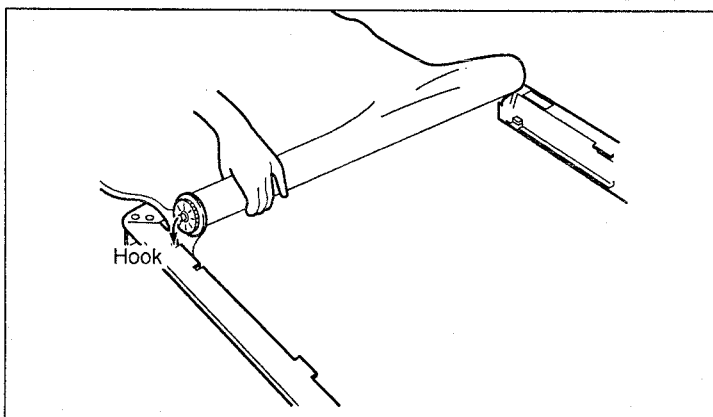
**Note:** During re-assembly, make sure that the screen home markers are located on the lower edge of the screen(film).

- 1) Insert the roller into a new screen (film), then hook the roller shaft as shown in Fig. 7-23.
- 2) Attach the roller fastening plate and screw it (See 7.2.2, step 19).



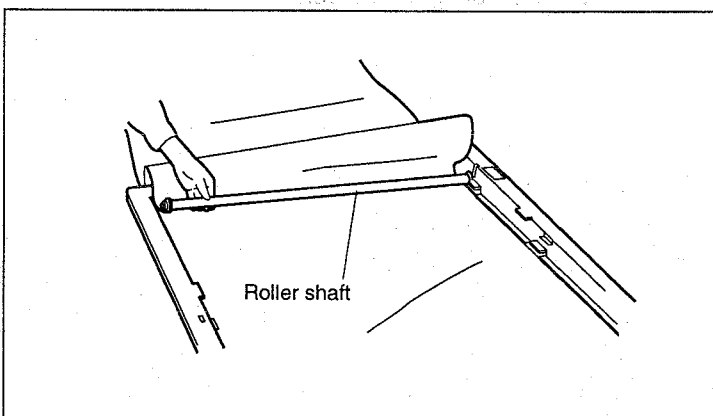
**Fig. 7-23**

- 3) Insert the main roller into the screen (film), then hook the roller shaft as shown in Fig. 7-24.
- 4) Attach the roller fastening plate and screw it (See 7.2.2, step 17).



**Fig. 7-24**

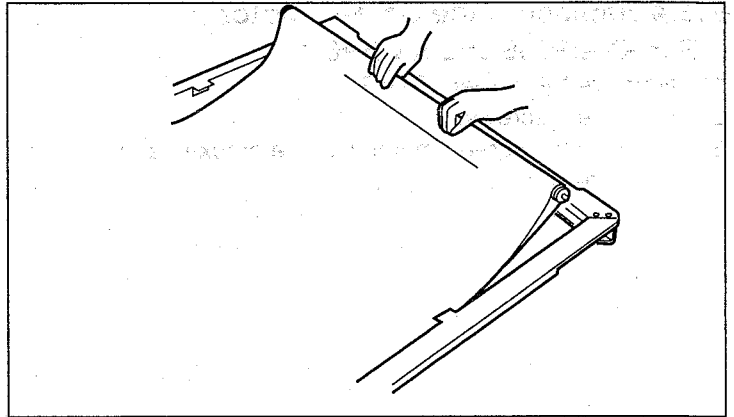
- 5) Attach the roller as shown in Fig. 7-25.
- 6) Attach the roller fastening plate and screw it (See 7.2.2, step 16).



**Fig. 7-25**

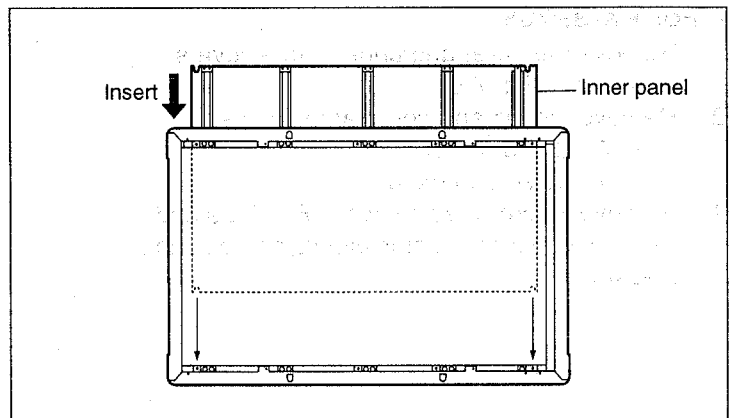


- 7) Insert the roller into the screen (film), then hook the roller shaft as shown in Fig. 7-26  
(See 7.2.3, step 1, 2).



**Fig. 7-26**

- 8) Insert the inner panel as shown in Fig. 7-27.
- 9) Secure the inner panel by 2 screws (J) and the collars (See Fig. 7-18).
- 10) Screw the screen tension frames (See 7.2.2, step 12).
- 11) Re-assemble the screen as instructed in 7.2.2, steps 1 through 12 in reverse order.

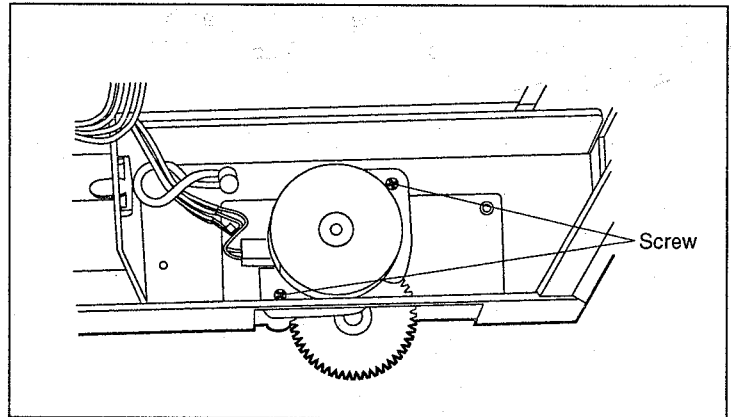


**Fig. 7-27**

## **7.2.4 Replacing the Screen Motor**

### **– For KX-BP535 and KX-BP635 –**

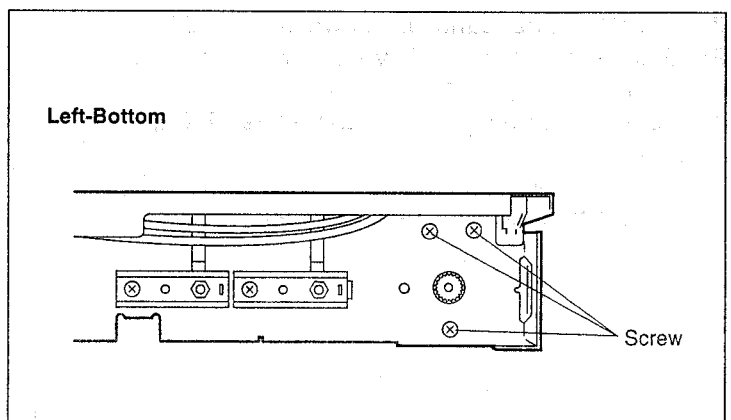
- 1) Remove the screen (See 7.2.1).
- 2) Remove 2 screws.
- 3) Remove the screen motor with the bracket, and disconnect the connector.



**Fig. 7-28**

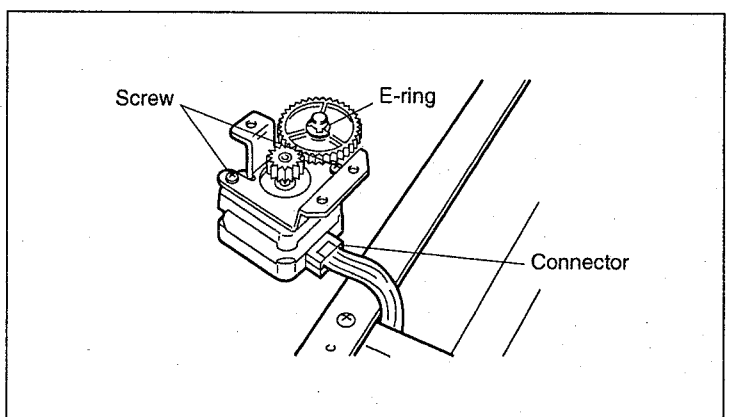
### **– For KX-BP735 –**

- 1) Remove the lower and upper frame covers (See 7.2.1, Fig. 7-6).
- 2) Remove the left and right frame covers (See 7.2.2, Fig. 7-13).
- 3) Unhook the screen motor harness.
- 4) Remove 3 screws as shown in Fig. 7-29 and remove the screen motor with its harness and bracket.



**Fig. 7-29**

- 5) Disconnect the connector.
- 6) Remove 1 E-ring, and remove the spacer and gear.
- 7) Remove 2 screws, and remove the screen motor attachment.



**Fig. 7-30**

### 7.2.5 Replacing the Fluorescent Lamp

- 1) Remove the screen (See 7.2.1).
- 2) Remove 7 screws, and remove the slit plate.  
(For KX-BP535 and KX-BP635 only)

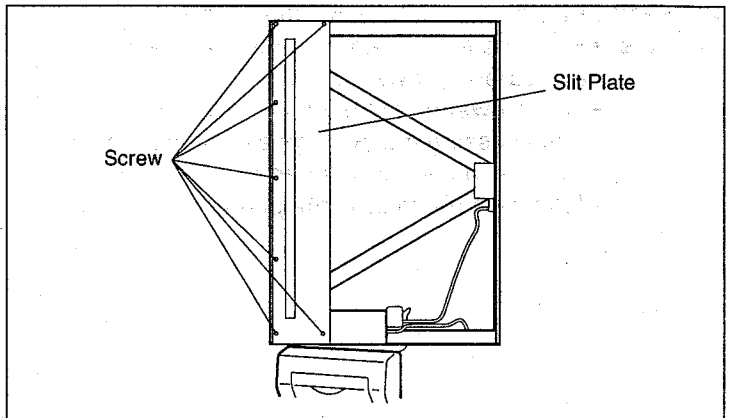


Fig. 7-31

- 3) Twist the fluorescent lamp 90 degrees to remove it as shown in Fig. 7-32.

**Note:** Because access to this lamp is limited, please twist the lamp as shown in Fig. 7-32 from the bottom.

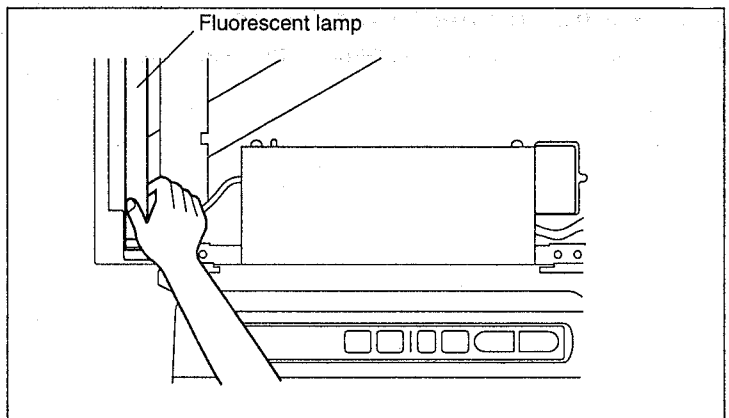


Fig. 7-32

### 7.2.6 Removing the Printer

**Note:** Always use screws for plastic base(screws with a coarse thread) at the locations marked by "P" at the printer.

- 1) Remove the screen (See 7.2.1).
- 2) Disconnect the 2 connector cables, connecting between optical section and printer section.  
**Note:** Also disconnect the clamps of the harness at the same time.
- 3) Remove 4 screws.

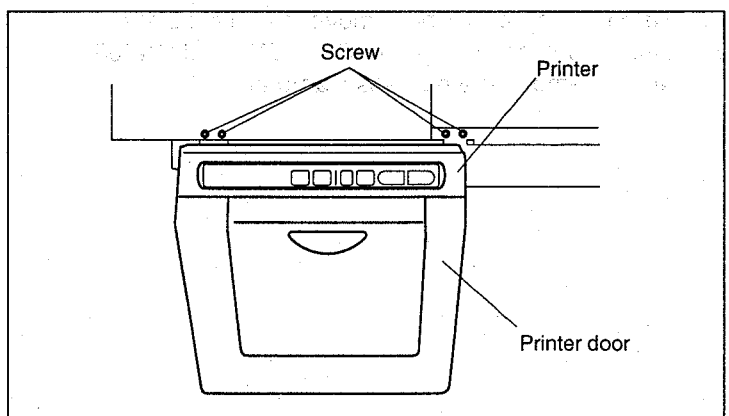


Fig. 7-33

- 4) Remove 2 screws, and remove the printer.

**Note:**

- From the front, slide the printer to the right and carefully lower it.
- When lowering the printer, lower it slowly while passing the two harnesses through the hole in the support frame.
- Take care not to drop the printer.

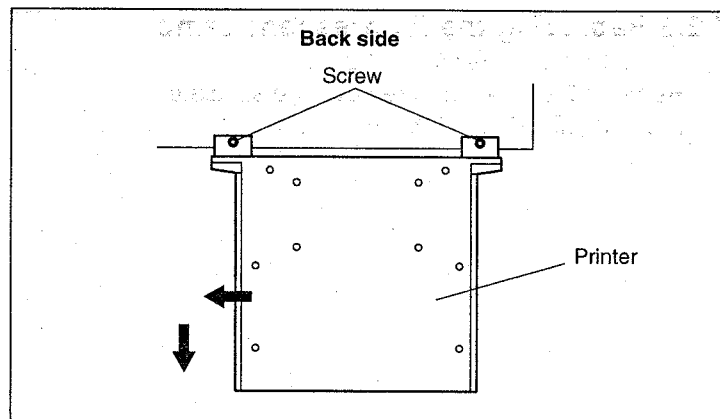


Fig. 7-34

### 7.2.7 Removing the Printer Door

- 1) Remove 10 screws, and remove the rear cover.

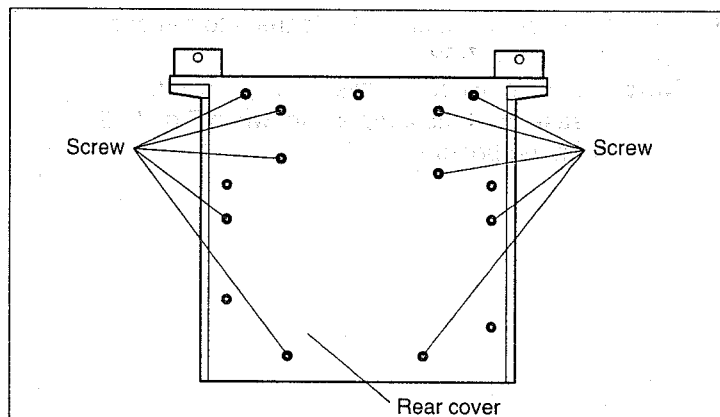


Fig. 7-35

- 2) Remove 2 screws, and remove the shield plate.  
3) Disconnect the connectors CN3, CN5 and CN403.  
**Note:** Remove the harness clamp and core.

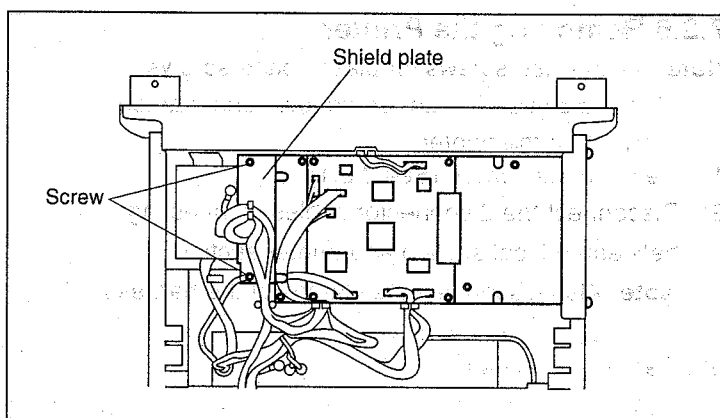


Fig. 7-36

- 4) Remove 3 screws (A), and remove the side panel (L).
- 5) Remove 3 screws (B), and remove the side panel (R).

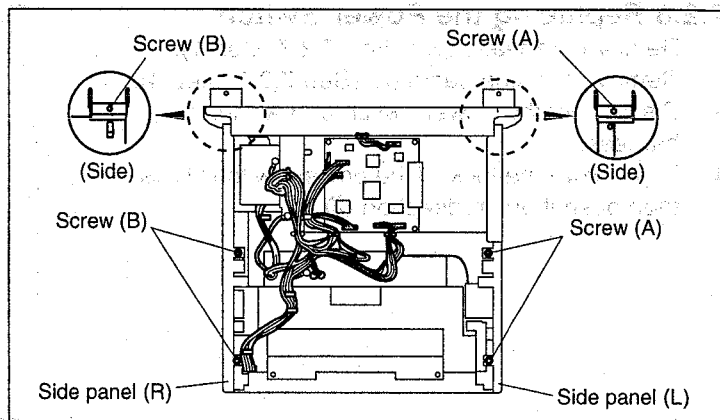


Fig. 7-37

- 6) Remove 4 screws (A), and remove the fulcrum support (R).
- 7) Remove E-ring as shown in Fig.7-39, and pull out the gear (A) and (B).
- 8) Remove 4 screws (B), and remove the fulcrum support (L).

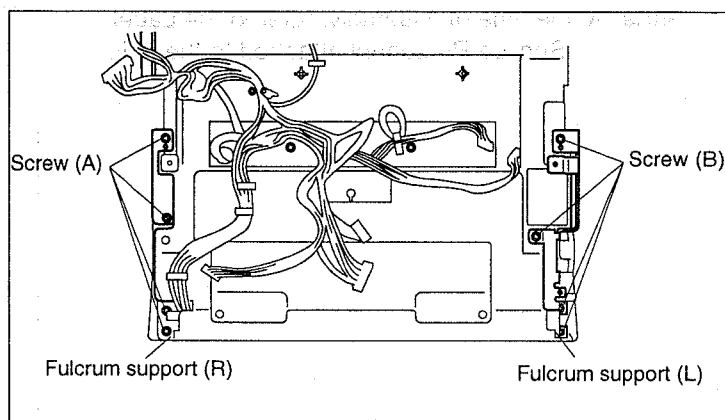


Fig. 7-38

- 9) Remove the printer door.  
**Note:** Remove the printer door in open condition together with the harness.

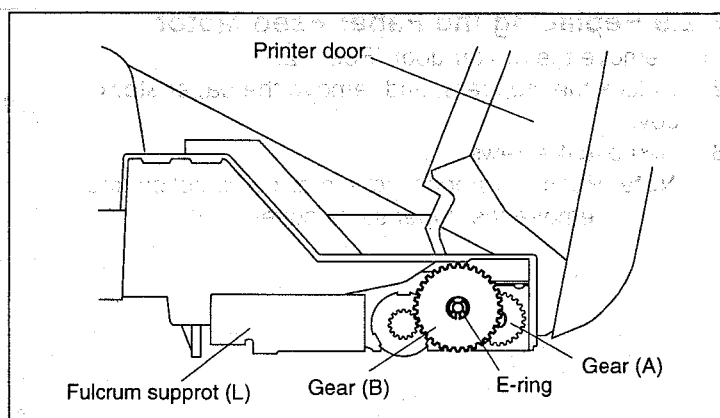
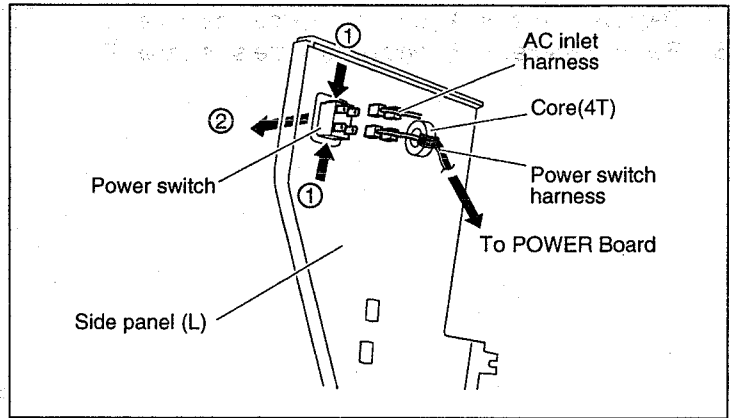


Fig. 7-39

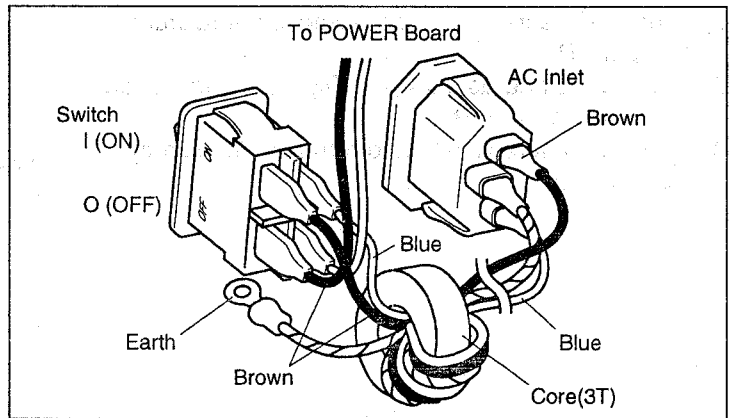
### 7.2.8 Replacing the Power Switch

- 1) Remove the rear cover (See 7.2.7, step 1).
- 2) Remove the side panel (L) (See 7.2.7, step 4).
- 3) Disconnect the power switch and AC inlet harness.
- 4) Push down the lock of the power switch ①, and then push it out in direction ②.



**Fig. 7-40**

**Note:** At the time of assembly, refer to the Label for Service Personnel attached to the unit.

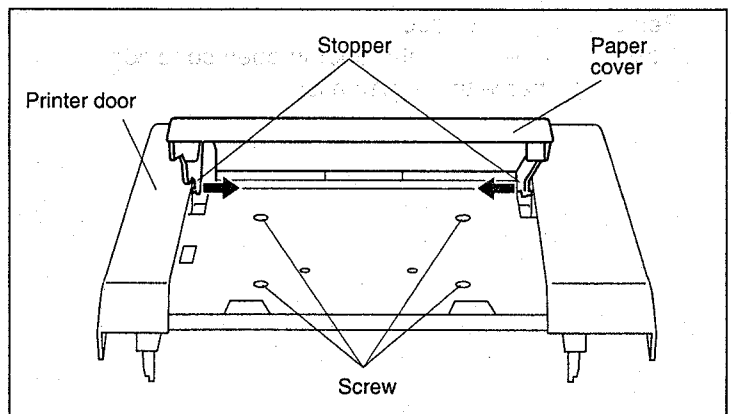


**Fig. 7-41**

### 7.2.9 Replacing the Paper Feed Motor

- 1) Remove the printer door (See 7.2.7).
- 2) Unlock the stoppers, and remove the paper stock cover.
- 3) Remove 4 screws.

**Note:** Push the stopper root in arrow direction and remove the paper stock cover.



**Fig. 7-42**

- 4) Remove 6 screws, and remove the paper path lower.

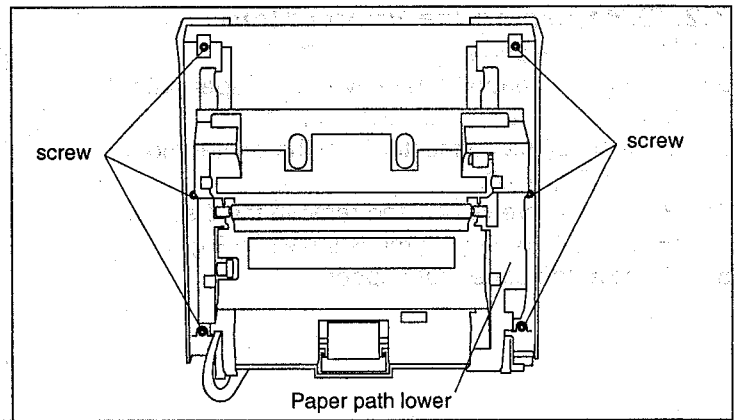


Fig. 7-43

- 5) Remove 4 screws, and remove the hopper bracket.

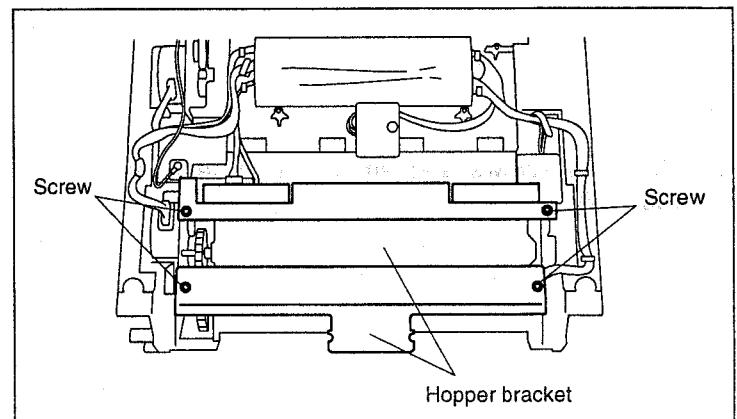


Fig. 7-44

- 6) Disconnect the connector from the paper feed motor shown in Fig. 7-45.  
7) Remove the 3 screws, raise the paper feed motor slightly, and remove it.

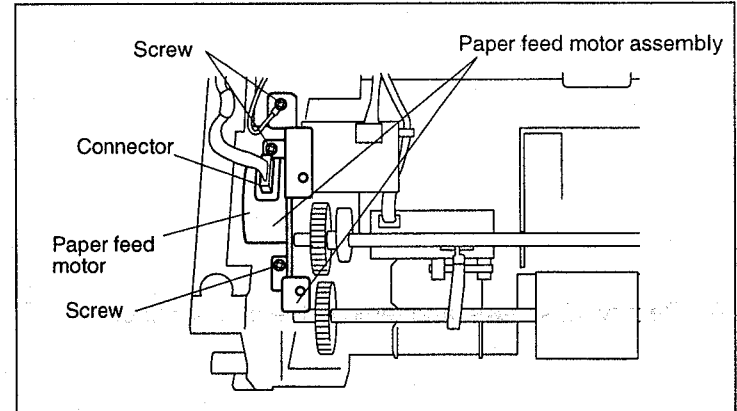


Fig. 7-45

- 8) Remove 2 screws, and remove the paper feed motor.

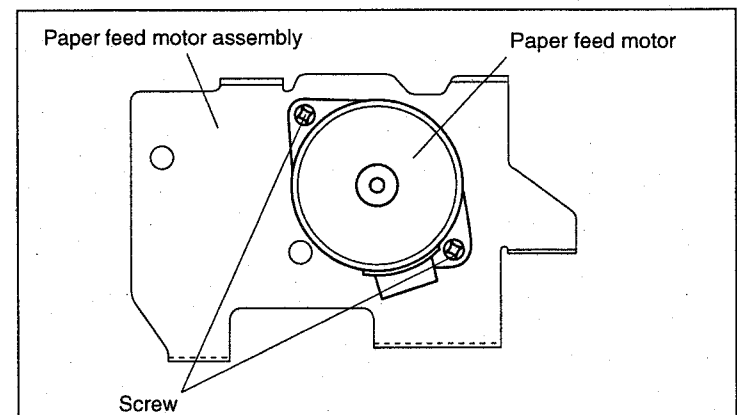


Fig. 7-46

## 7.2.10 Replacing the Printer Motor

- 1) Remove the printer door (See 7.2.7).
- 2) Remove the paper stock cover and paper path lower (See 7.2.9, steps 2 through 4).
- 3) Disconnect the connector from the printer motor shown in Fig. 7-47.
- 4) Remove 4 screws (A), and remove the 1 screw (B) from the ground harness shown in Fig. 7-47.
- 5) Remove the paper path upper.

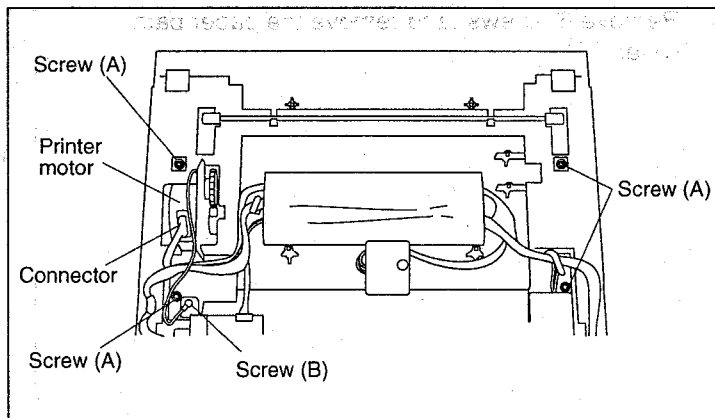


Fig. 7-47

- 6) Remove 2 screws, and remove the printer motor assembly.

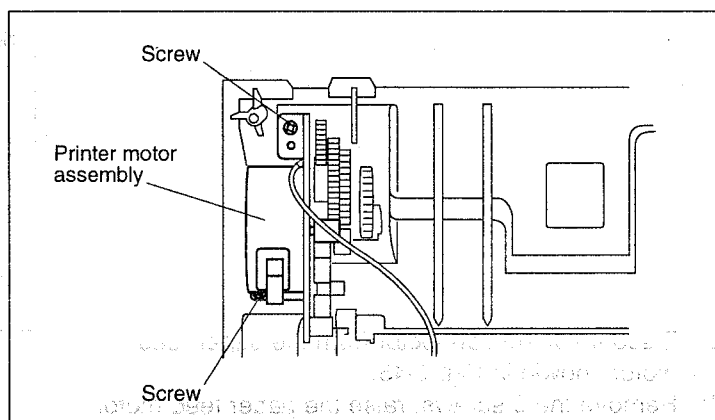


Fig. 7-48

- 7) Remove 2 screws, and remove the printer motor.

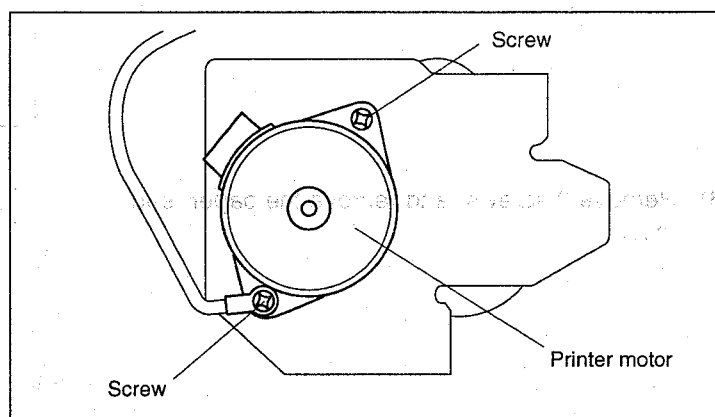


Fig. 7-49



### 7.2.11 Replacing the Platen Roller

- 1) Open the printer door.
- 2) Remove the platen roller.

**Note:** • Insert the flat-blade screwdriver to the lack, and turns it into the direction of the arrow.  
• It is possible to remove when brim is out.

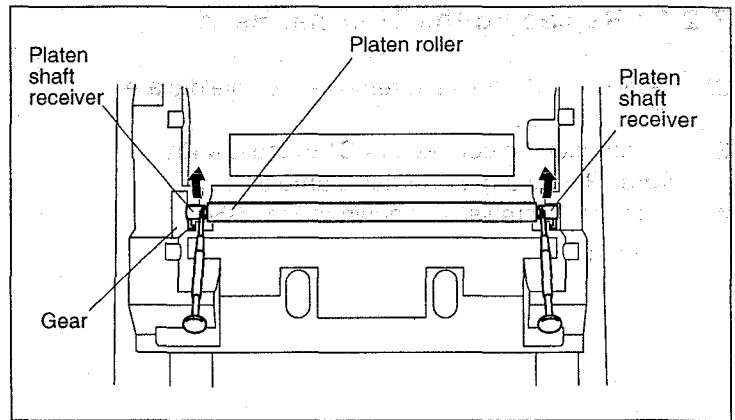


Fig. 7-50

- 3) Push up the stopper into the direction of the arrow, and pull out the gear.
- 4) Remove 2 platen shaft receiver.

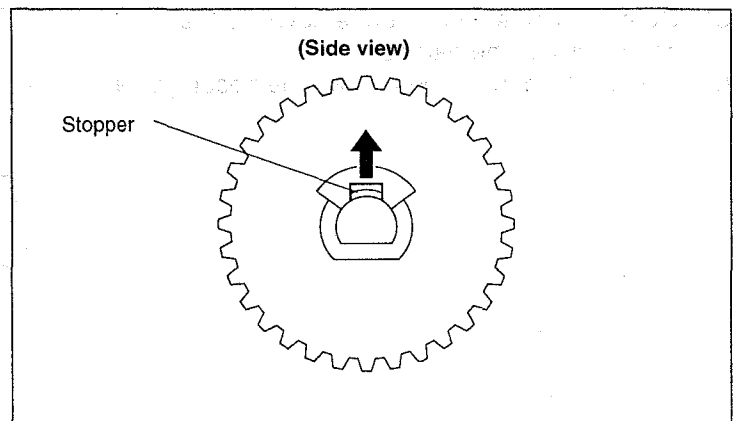


Fig. 7-51

### 7.2.12 Replacing the Pick-up Roller

- 1) Remove the paper feed motor (See 7.2.9).
- 2) Remove the pick up roller.

**Note:** Pull out the gear, roller shaft, etc. together in arrow direction.

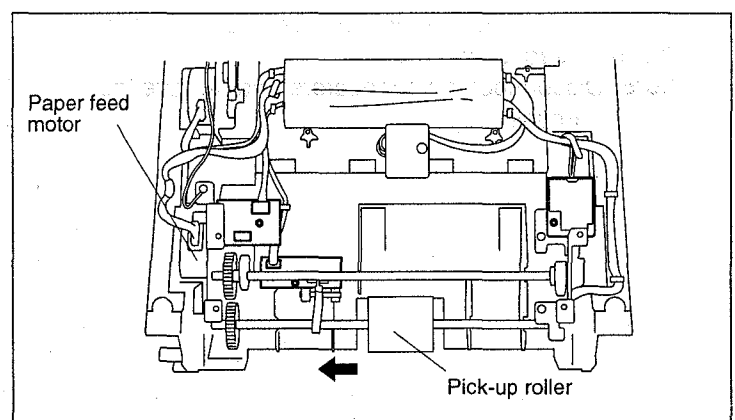


Fig. 7-52

- 3) Pull the E-ring ① fixing the pick-up roller, and pull off the pick-up roller in arrow direction ② to remove it.

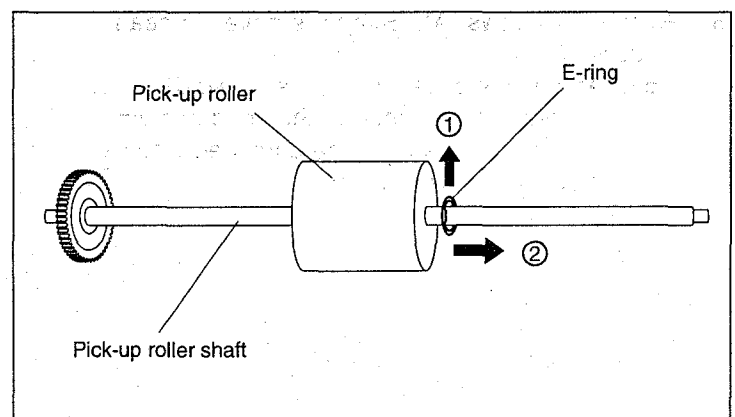


Fig. 7-53

### 7.2.13 Replacing the Thermal Head

- 1) Remove the rear cover (See 7.2.7, step 1).
- 2) Remove 2 screws, and remove the shield plate (See Fig. 7-26).
- 3) Disconnect the connectors CN6 and CN402.  
**Note:** Remove the harness clamp and core.
- 4) Remove 2 screws, as shown in Fig. 7-54.

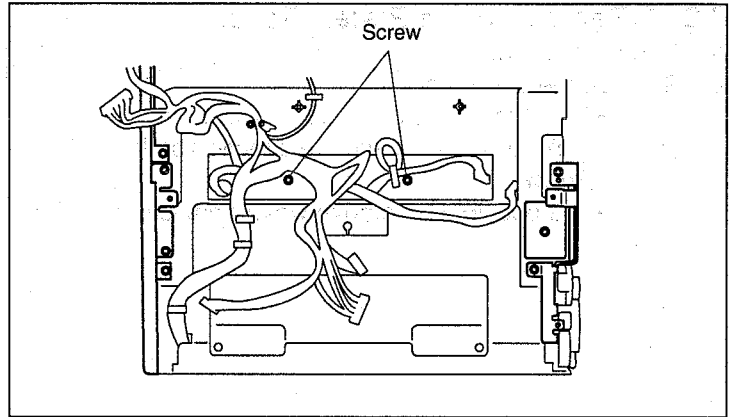


Fig. 7-54

- 5) Open the printer door then remove the thermal head unit with the harness.
- 6) Remove 2 screws, and remove the ribbon guide.

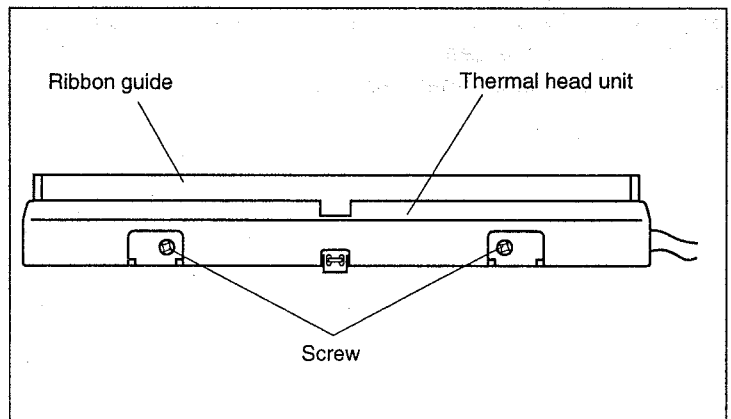


Fig. 7-55

- 7) Remove the 3 head spring guides and pull out the thermal head assembly.  
**Note:** Disconnect the connectors and remove the harness.

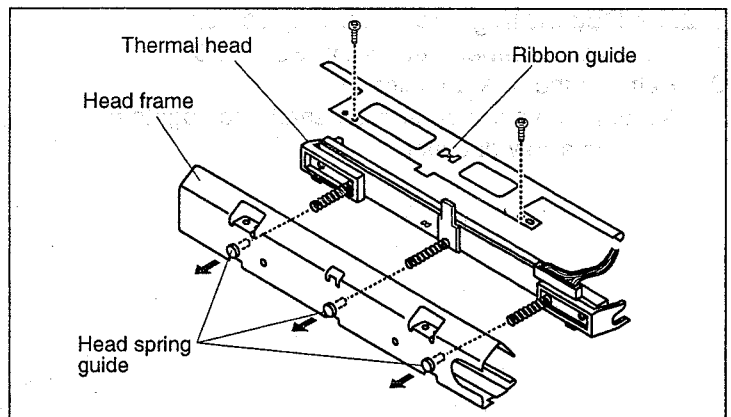


Fig. 7-56

- 8) Remove 3 screws (A), (B) and remove the head holders (R)/(L).  
**Note:** At the time of assembly, the screw (B) must be used at the center of the head fulcrum. The thermal head will be damaged when a different screw is used.

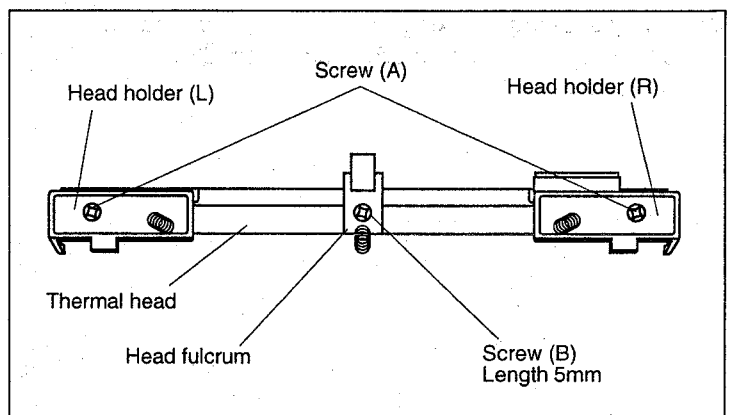


Fig. 7-57

### 7.2.14 Replacing the MAIN Board

- 1) Remove the screen (See 7.2.1).
- 2) Disconnect the connector CN700.
- 3) Remove 4 screws, and remove the MAIN Board block (assembly).

**Note:** After assembling MAIN Board, light axis adjustment is required again.

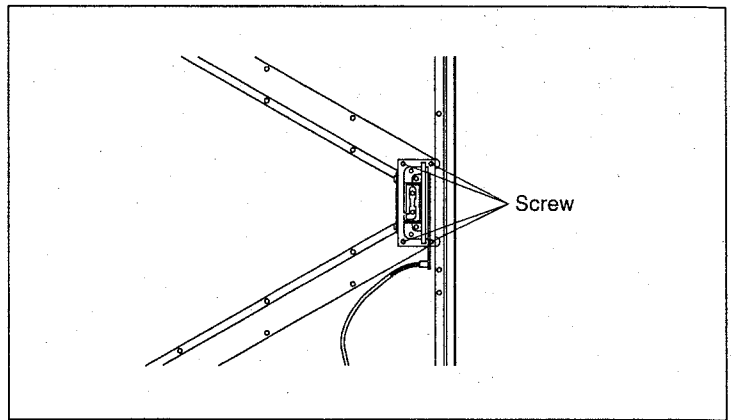


Fig. 7-58

- 4) Remove 2 screws, and remove the MAIN Board.

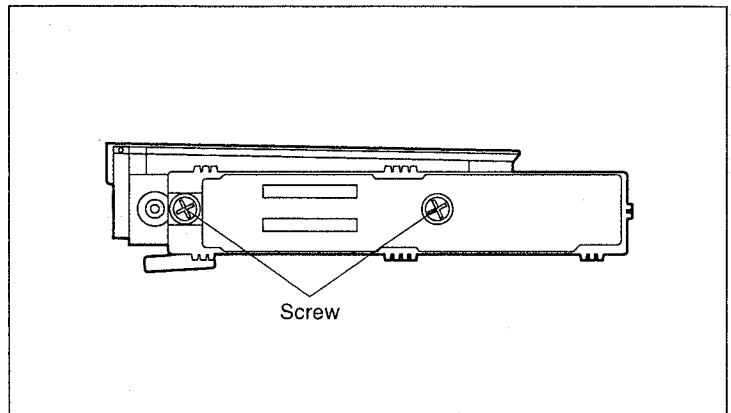


Fig. 7-59

### 7.2.15 Replacing the SUB Board

- 1) Remove the rear cover (See 7.2.7, step1).
- 2) Disconnect all connectors on the SUB Board.
- 3) Remove 4 screws, and remove the SUB Board.

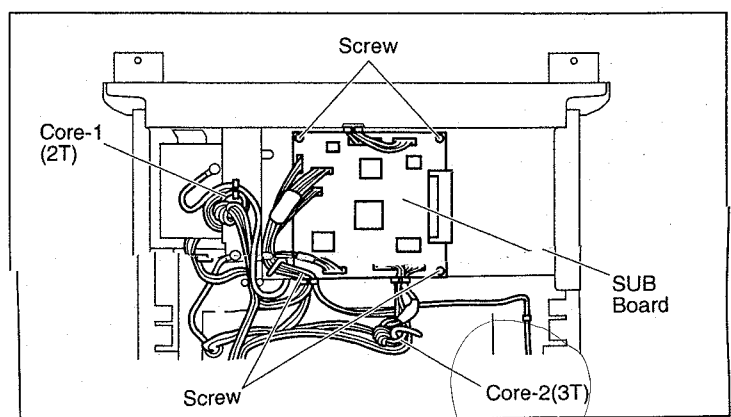


Fig. 7-60

### 7.2.16 Replacing the HOME SENSOR Board

- 1) Remove the screen (See 7.2.1).
  - 2) Remove 2 screws, and remove the HOME SENSOR Board with the holder.
- Note:** Use a screwdriver, with a long shaft (20cm/8 inches).

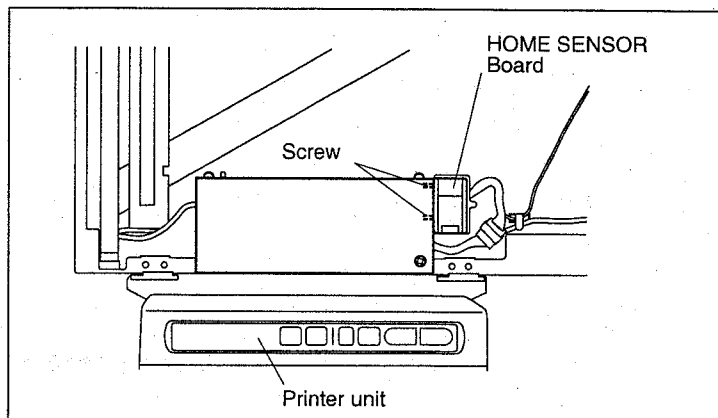


Fig. 7-61

- 3) Remove 1 screw, and remove the HOME SENSOR Board.

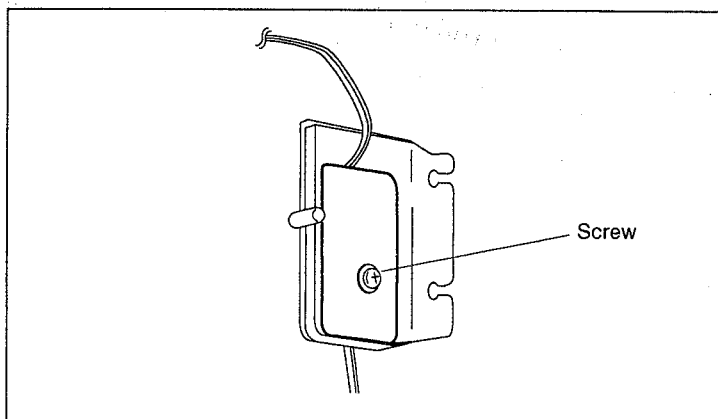


Fig. 7-62

### 7.2.17 Replacing the LAMP DRIVER Board

- 1) Remove the screen (See 7.2.1).
- 2) Remove slit plate (KX-BP535 and KX-BP635 only) (See 7.2.5, step 2).
- 3) Remove screw (B) (KX-BP735 only).
- 4) Remove screws (A) and remove the board cover.

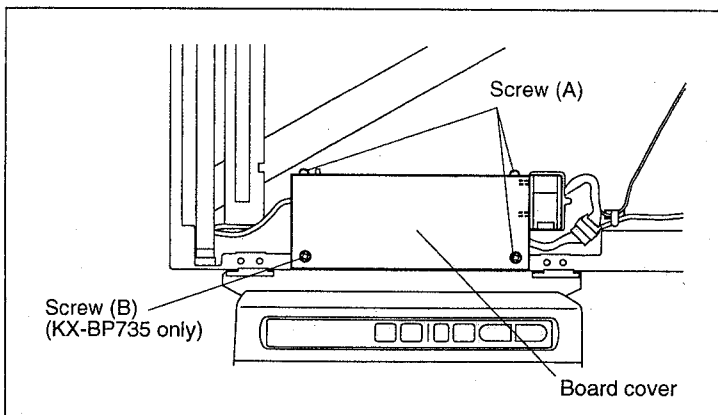


Fig. 7-63

- 5) Disconnect all connectors on the LAMP DRIVER Board.
- 6) Remove 2 screws, and remove the LAMP DRIVER Board.

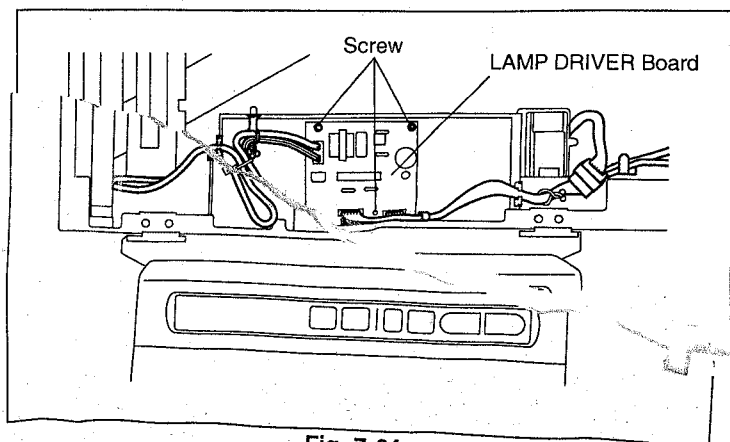


Fig. 7-64

### 7.2.18 Replacing the POWER Board

- 1) Remove the rear cover (See 7.2.7, step 1).
- 2) Remove 2 screws (A), and remove the shield plate.
- 3) Remove 2 screws (B), and remove the option board cover.
- 4) Disconnect all connectors on the SUB Board.
- 5) Remove 4 screws (C), and remove the SUB Board bracket with the SUB Board.

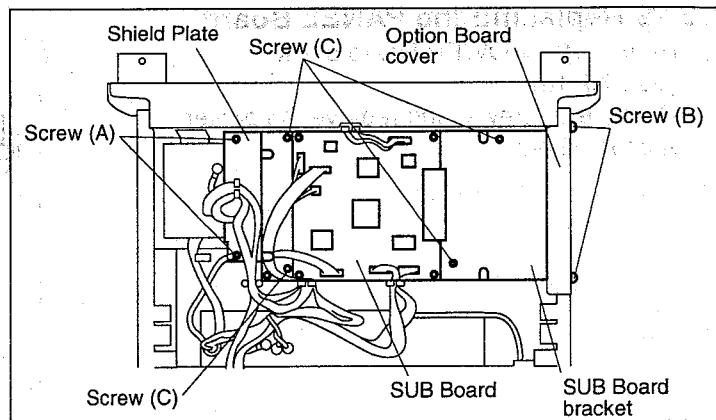


Fig. 7-65

- 6) Remove 5 screws, and remove the POWER Board block.
- 7) Disconnect all connectors on the POWER Board.

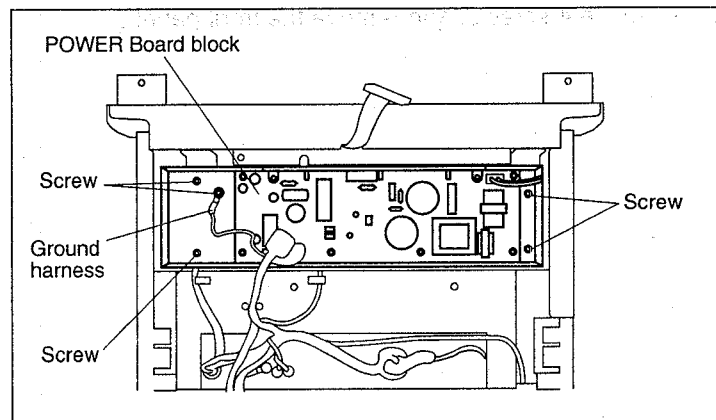


Fig. 7-66

- 8) Remove 9 screws, and remove the POWER Board.

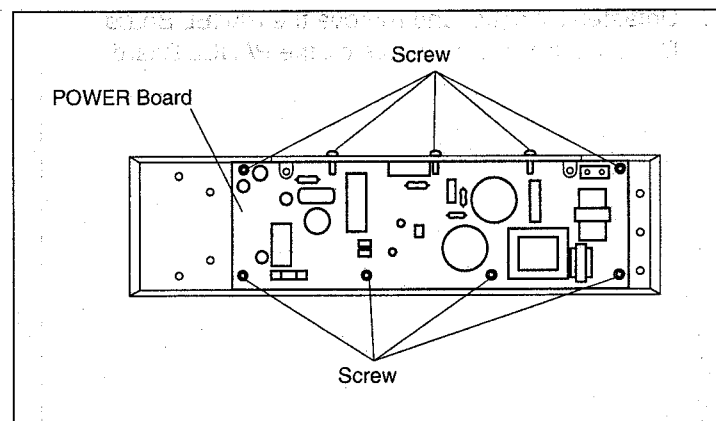
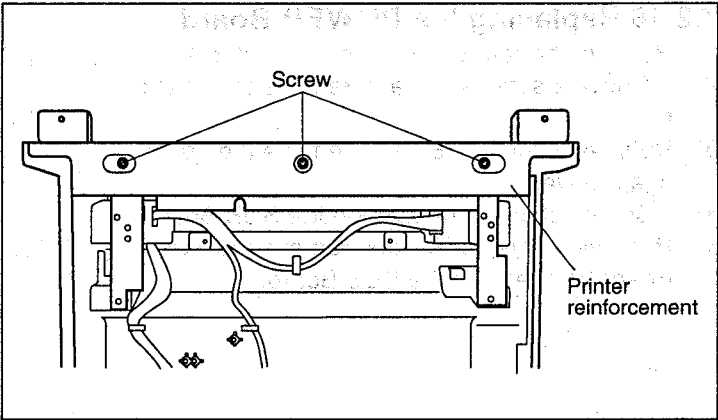


Fig. 7-67

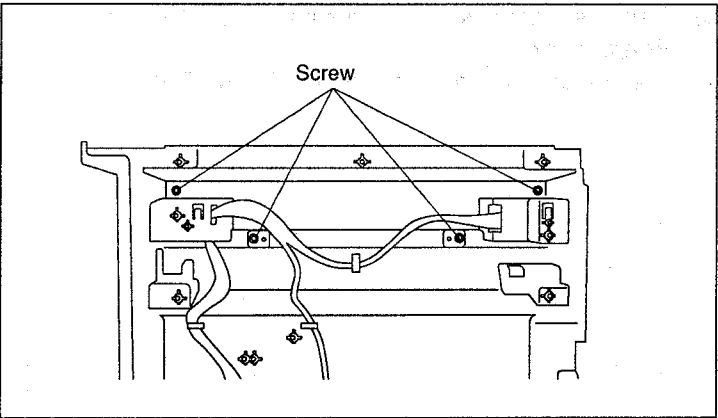
**7.2.19 Replacing the PANEL Board**

- 1) Remove the POWER Board block (See 7.2.18).
- 2) Remove 3 screws, and remove the printer reinforcement.



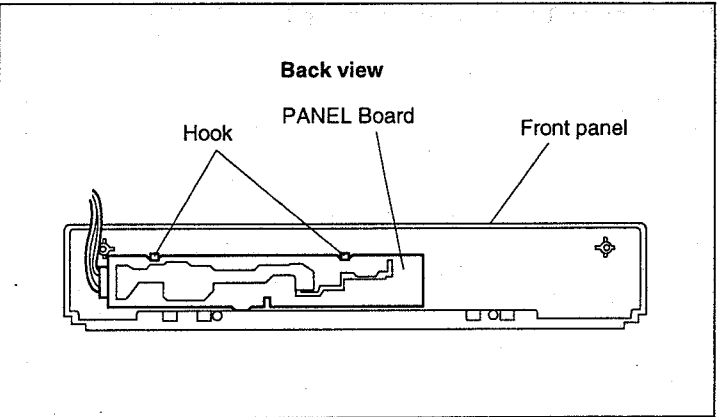
**Fig. 7-68**

- 3) Remove 4 screws, and remove the front panel.



**Fig. 7-69**

- 4) Unfasten 2 hooks, and remove the PANEL Board.
- 5) Disconnect 3 screws, and remove the front panel.



**Fig. 7-70**

### 7.2.20 Replacing the MOTOR DRIVER Board

- 1) Remove the printer door (See 7.2.7).
- 2) Remove paper stock cover and paper path lower. (See 7.2.9, steps 2 through 4).
- 3) Open the driver cover, and disconnect all connectors on the MOTOR DRIVER Board.
- 4) Remove 1 screw, and remove the MOTOR DRIVER Board.

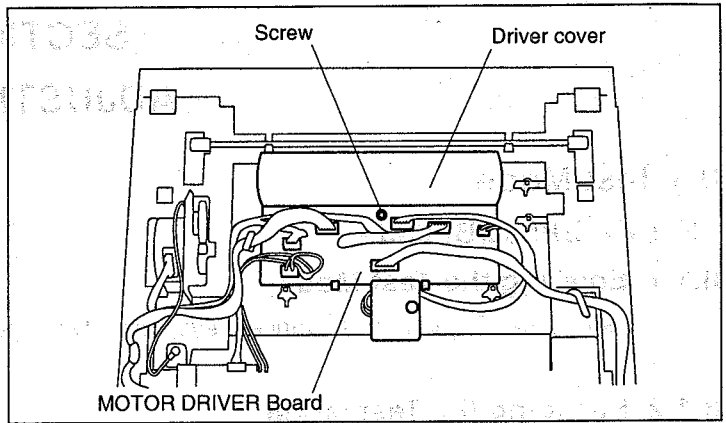


Fig. 7-71

### 7.2.21 Replacing the TOP SENSOR Board

- 1) Remove the printer door (See 7.2.7).
- 2) Remove paper stock cover and paper path lower. (See 7.2.9, steps 2 through 4).
- 3) Remove 1 screw, and remove the TOP SENSOR Board.
- 4) Disconnect the connector.

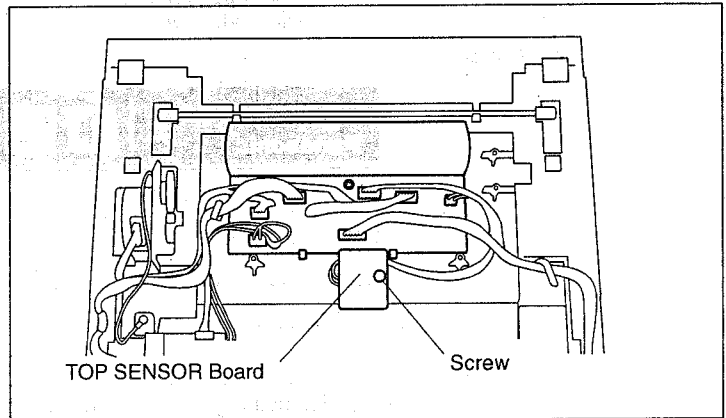


Fig. 7-72

### 7.2.22 Replacing the HOPPER SENSOR Board, PAPER SENSOR Board, FILM END SENSOR Board

- 1) Remove the printer door, paper path lower and hopper bracket (7.2.9, steps 1 through 5).
- 2) Remove the screw fixing each circuit board, and remove the circuit boards.
- 3) Disconnect the connectors of each circuit board.

**Note:** When removing the paper sensor circuit board, push down the tip of the paper sensor lever and then remove the circuit board.

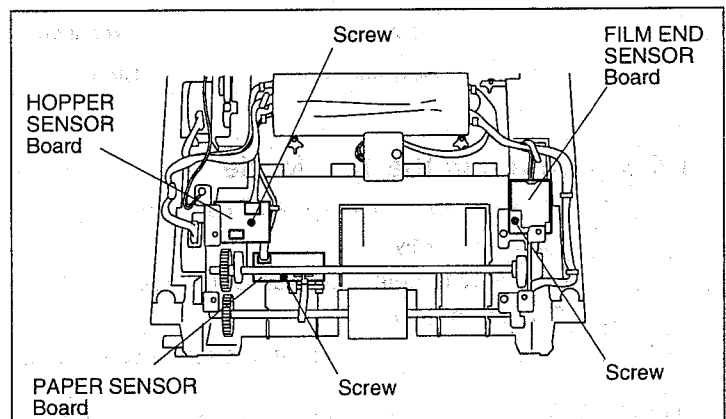


Fig. 7-73

## SECTION 8

### ADJUSTMENTS

#### 8.1 Test Mode

- For KX-BP535/BP635 -

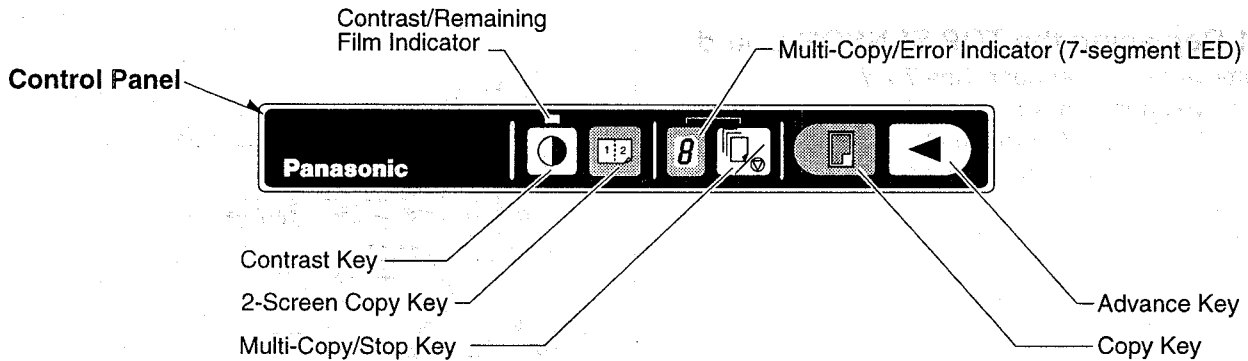
##### 8.1.1 Entering the Test Mode

While pushing the "Copy" and "Advance" keys, turn ON the power switch.

##### 8.1.2 Escaping the Test Mode

Turn OFF the power switch.

##### 8.1.3 Functions in the Test Mode



Contrast / Remaining Film Indicator	During to select Test Item: Flashes ON and OFF During to select Set Value / During execution: OFF
Multi-Copy/Error Indicator	Test Item / Set Value display
Contrast Key	Special
2-Screen Copy Key	-
Multi-Copy/Stop Key	+
Copy Key	Execution
Advance Key	Stop

##### 8.1.4 Operation in the Test Mode

1. Push - or + key to select desired Test Item.
2. Push "Execution" key.
3. Push - or + key to select desired Set Value.
4. Push "Execution" key.

Changes the Set Value, and returns to the same as that in step 1.

- Notes:**
- If you want to discontinue, push "Stop" key.
  - If the Test Item has no Set Value (for example A: CCD adjustment), the functional motion starts at step 2.



## - For KX-BP735 -

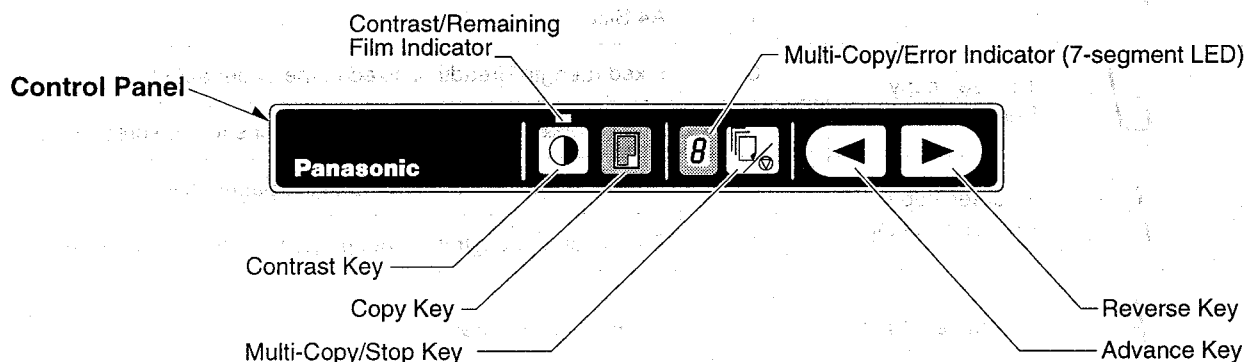
### 8.1.1 Entering the Test Mode

While pushing the "Advance" and "Reverse" keys, turn ON the power switch.

### 8.1.2 Escaping the Test Mode

Turn OFF the power switch.

### 8.1.3 Functions in the Test Mode



Contrast / Remaining Film Indicator	During to select Test Item: Flashes ON and OFF During to select Set Value / During execution: OFF
Multi-Copy/Error Indicator	Test Item / Set Value display
Contrast Key	Special
Copy Key	—
Multi-Copy/Stop Key	+
Advance Key	Execution
Reverse Key	Stop









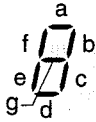
### 8.1.4 Operation in the Test Mode

1. Push – or + key to select desired Test Item.
2. Push "Execution" key.
3. Push – or + key to select desired Set Value.
4. Push "Execution" key.














Changes the Set Value, and returns to the same as that in step 1.

- Notes:**
- If you want to discontinue, push "Stop" key.
  - If the Test Item has no Set Value (for example A: CCD adjustment), the functional motion starts at step 2.

8.1.5 Table of Test Item

Test Item	Indication	Function	Set Value	Description
A		CCD adjustment	—	Adjust the CCD (See 8.3)
B		Model Setting	0	KX-BP535
			1	KX-BP635
			4	KX-BP735
C		Paper size setting	0	Letter Size
			1	A4 Size
D		1-screen copy Print size setting	0	Fixed (Length/Breadth is fixed to the paper size.)
			1	Proportional (Length/Breadth proportions to the screen size.)
E		2-screen copy Print size setting	0	Fixed (Length/Breadth is fixed to the paper size.)
			1	Proportional (Length/Breadth proportions the screen size.)
F		Test pattern print	—	Prints the test pattern.
G		Continuous operation	—	<p>Continuously executes motions below:</p> <div><p>→ 9 pages multi-copy → Screen advance →</p><p>→ Screen reverse x 2 → 5 minutes pause (KX-BP735 only) →</p></div> <p>Repeat</p>
H		Sensor check	—	<p>a : Film end sensor (ON by manual turning of the gear)</p> <p>b : —</p> <p>c : Top sensor (ON by paper detection)</p> <p>d : Door sensor (ON when the door is closed)</p> <p>e : Paper sensor (ON when there is no paper)</p> <p>f : Hopper sensor (ON when the hopper is down)</p> <p>g : Home sensor (ON when not at home position)</p> 

## 8.2 Error Code

Error	Indication	Error Name	Cause	Remedy
O		ROM error	ROM data is abnormal.	Replace the CPU.
A		RAM error	Does not access normally to CPU built-in RAM.	Replace the CPU.
B		Back up memory (EEPROM) error	Data in EEPROM is lost.	Turn power OFF, and ON again. Return to normal condition, set up valued data into the EEPROM. If not, replace the EEPROM.
M		Memory error	Does not access normally to DRAM.	Replace the DRAM.
I		Image processor error	LSI for image processing is abnormal.	Replace the LSI.
T		T/H temp. error	Temperature of the thermal head is too high.	Turn power OFF, after a while. turn power ON again.
L		Light intensity error	Low temperature (10°C [50°F] or less)	Raise the room temperature.
			Fluorescent lamp is too dark.	Replace the fluorescent lamp.
S		Screen error	Screen does not move.	Remove any chart taped to the screen. Try to move the screen by hand.
			Does not detect the home position.	Check the black origin mark Check the screen home sensor.
P		Paper error	No paper	Load the copy paper.
D		Door error	Printer not closed correctly.	Close the printer door correctly.
R		Film end error	The thermal transfer film has reached to film end.	Exchange the thermal transfer film.
			Film cassette is not set correctly.	Set the film cassette correctly.
J		Jam error	Paper jam	Open the printer door and remove the jamming paper.
H		Hopper error	No hopper operation	Check the mechanical condition of the hopper and inspect the hopper sensor.

**Note:** Indication flashes ON and OFF

## 8.3 CCD Adjustment

### 8.3.1 Prepare for tool

- 1) Screen Tool (PBMDA0244Z-J)
- 2) Dual-Trace analogue Oscilloscope .....20MHz Band Width with "x 10 magnification" mode

### 8.3.2 Screen Tool Installation

Remove the screen.

Attach the Screen Tool to the optical unit as follows (see Fig. 8-1):

1. Install the Screen Tool so that the "7 lines area" is on the left side and facing the mirror.
2. Install the wing bolt through the screen tool upper bracket into the scanner/printer. Do not tighten.
3. Install the wing bolt through the screen tool lower bracket into the scanner/printer and tighten.
4. While pushing the upper bracket upward, tighten the upper wing bolt so there is no slack in the screen tool film.

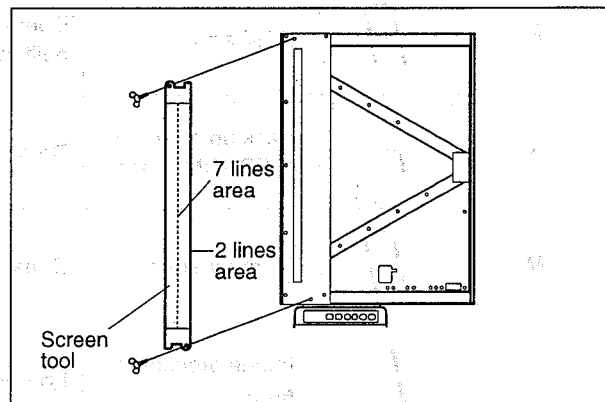


Fig. 8-1

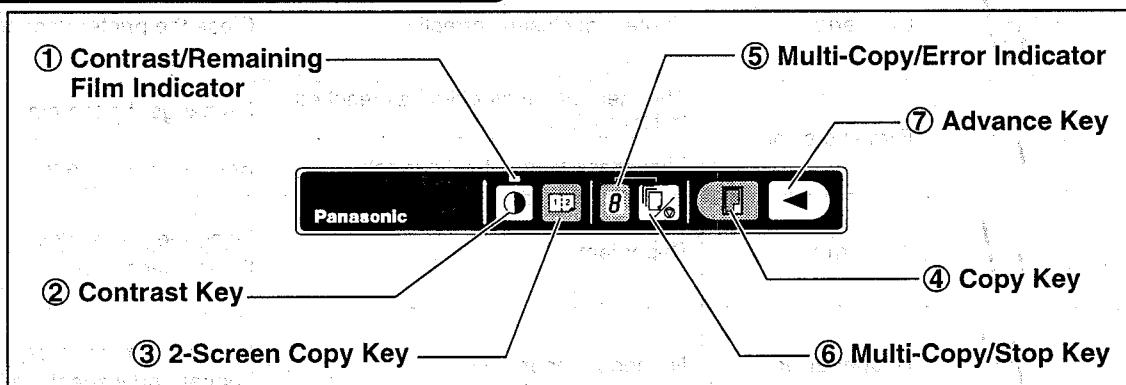
### 8.3.3 Test and Service Equipment

Connect and set an oscilloscope as follows:

- CH1 to TP702 [DC Normal, Mode 0.5 V/div]
- CH2 to TP701 [DC Normal, Mode 5 V/div]
- GND to TP700
- Time is 1 ms/div.
- CH1 ... 0.5V/div. CH2 ... 5V/div.
- Trigger Channel of the Scope: CH2

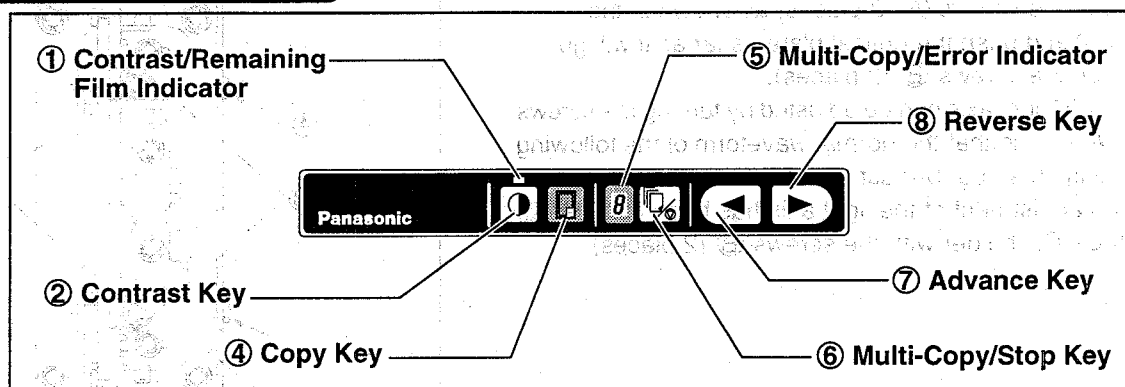
### 8.3.4 Entering the Test Mode

#### Control Panel for KX-BP535 and KX-BP635



1. Turn On the power while holding the "**Copy**" key and the "**Advance**" key pressed.  
At this time, the 7-segment LED displays "A", and the Contrast / Remaining Film Indicator flashes.
2. When the "**Copy**" key is pressed, the fluorescent lamp lights and the Contrast / Remaining Film Indicator goes out.  
This means entering CCD adjustment mode.

## Control Panel for KX-BP735



1. Turn ON the power while holding the "Advance" key and the "Reverse" key pressed.  
At this time, the 7-segment LED displays "A", and the Contrast / Remaining Film Indicator flashes.
2. When the "Advance" key is pressed, the fluorescent lamp lights and the Contrast / Remaining Film Indicator goes out.

This means entering CCD adjustment mode.

**Note:** In the adjustment procedures from now on, the KX-BP735 key operations will be shown with parentheses for example ("Advance" key).

8.3.5 CCD Light-axis Adjustment

- 1. Loosen the screws ① (2 places) as shown in the Fig.8-2 and push the optical plate as far as it will go.
- 2. Loosen the screws ② (2 places).
- 3. The CCD light axis can be adjusted by turning the screws ③. Adjust so that the normal waveform of the following figure is obtained. (Adjust until saturation is reached.)
- 4. When adjustment of the light axis has been completed, fix the CCD holder with the screws ② (2 places).

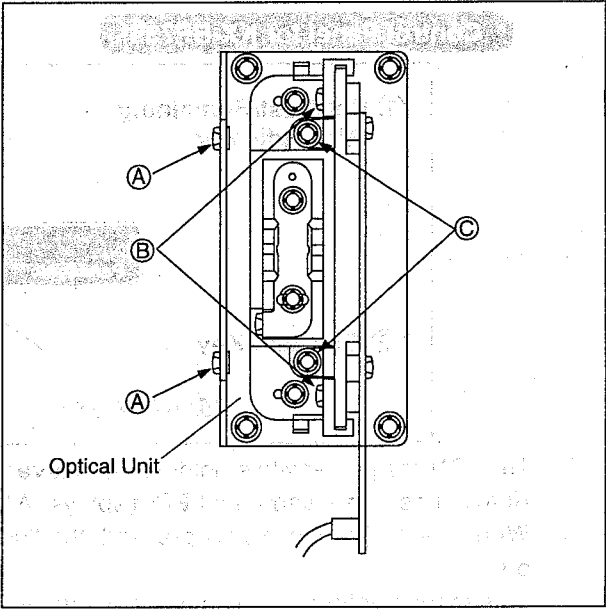


Fig. 8-2

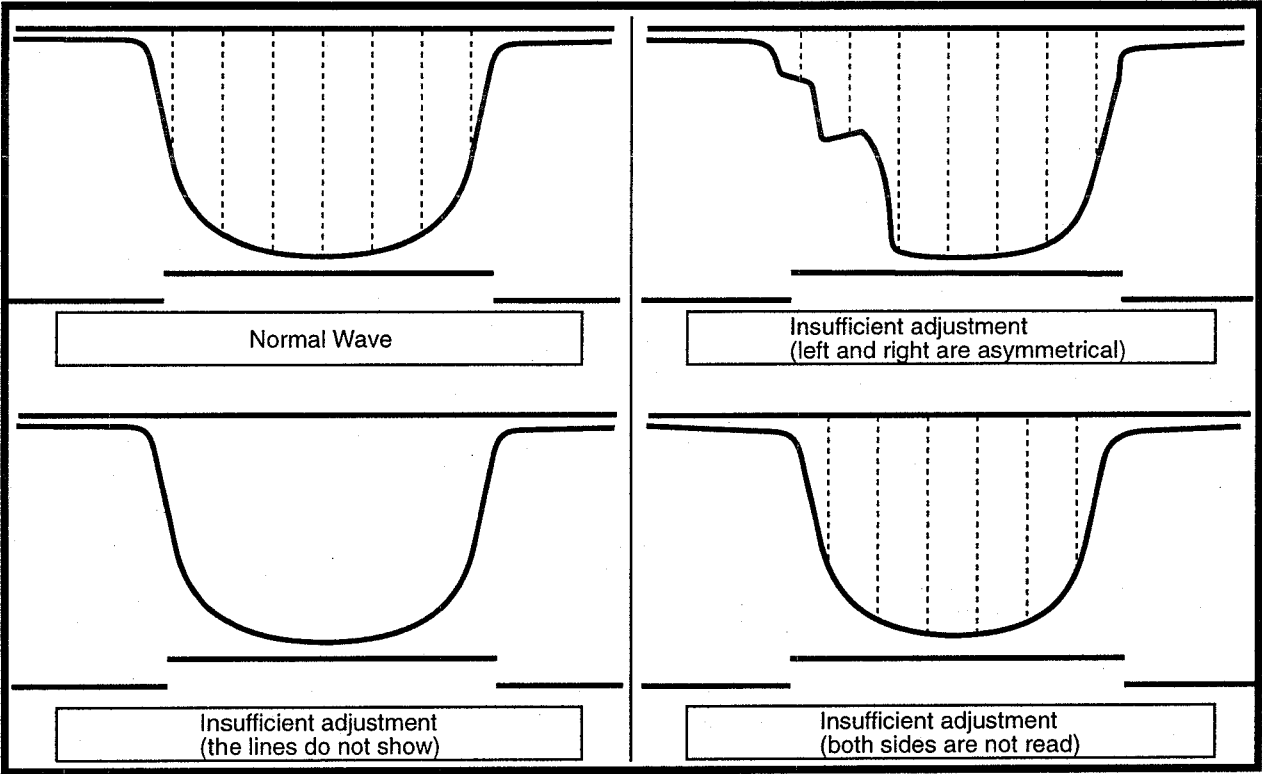


Fig. 8-3

### 8.3.6 Focus Adjustment (Only in case out of focus)

1. Loosen the screws ① (2 places) shown in the figure on the right.
2. Adjust the optical plate, roughly so that the peak becomes about 0.8 V.
3. Lightly tighten the screws ① (2 places) shown in the figure on the right.
4. Loosen the screws ② (2 places) shown in the figure on the right.
5. By turning the screws ③, the lens can be slid forward or back. Adjust the focus so that the lines become as large as possible.
6. After finishing the adjustment, tighten the screws ② (2 places).

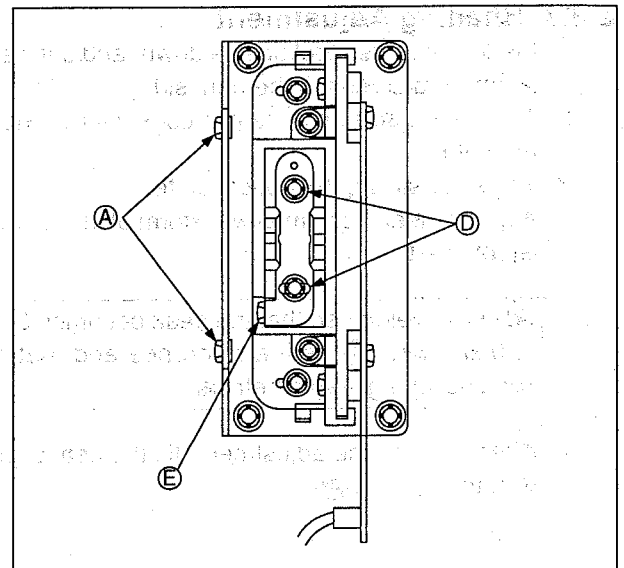


Fig. 8-4

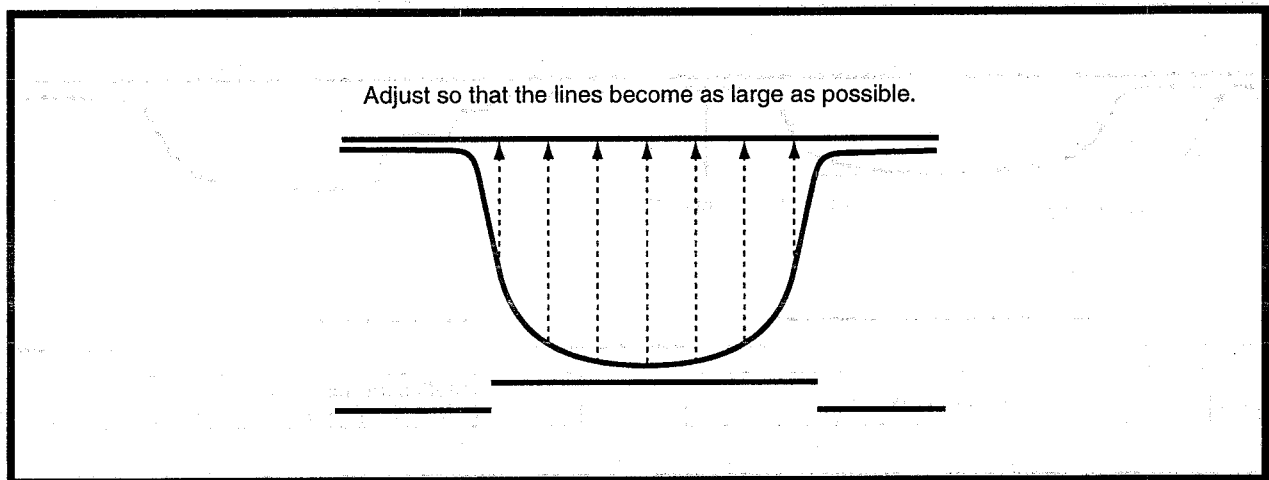


Fig. 8-5

### 8.3.7. Shading Adjustment

1. Insert the screen tool upside down, and set it so that the 2-line area comes to the right side.
2. Loosen the screws ① (2 places) shown in the figure on the right.
3. Adjust by sliding the optical plate.  
Adjust so that the normal waveform of the following figure is obtained.

Adjust waveform so that the peak becomes 0.7 V to 0.8 V with ① as the reference and that the curve is left/right symmetrical.

4. After finishing the adjustment, fix the optical plate with the screws ①.

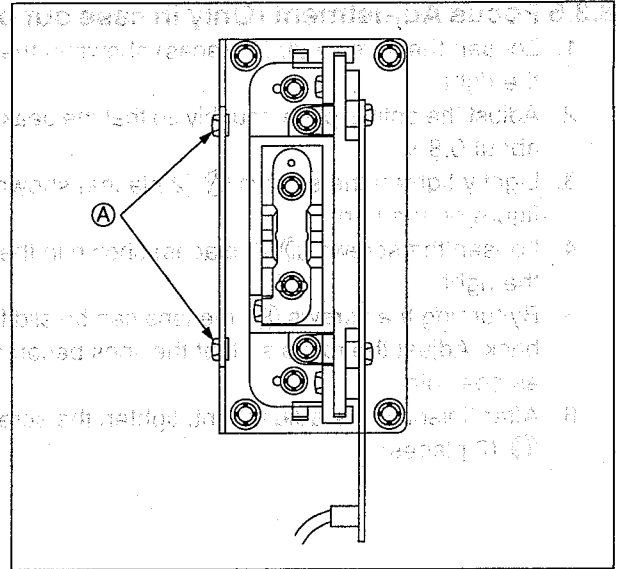


Fig. 8-6

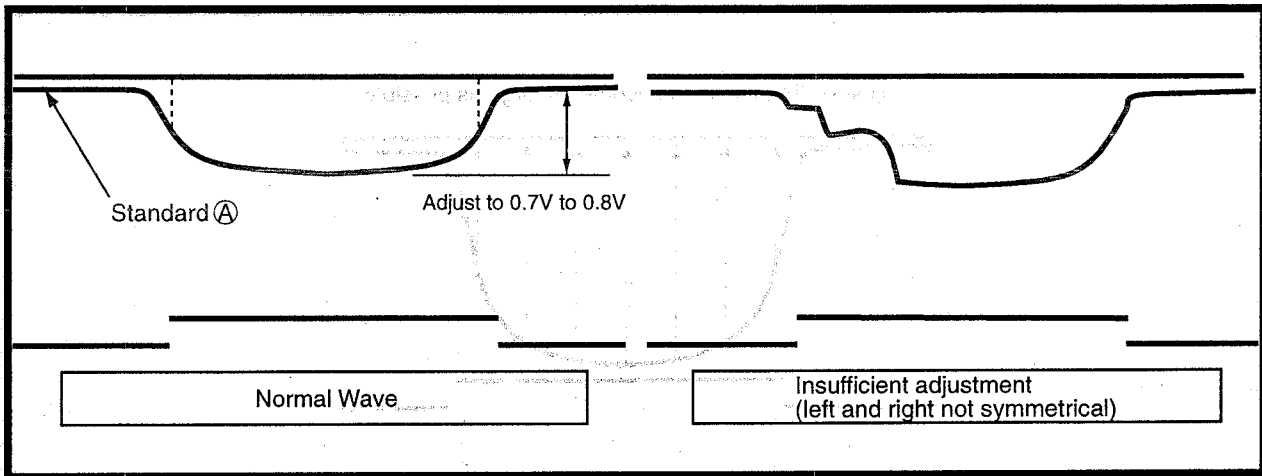


Fig. 8-7

#### Confirmation point

When the waveform after adjustment is not flat and the potential difference (difference between m and n) at the center is 0.15V or more, readjustment is required.

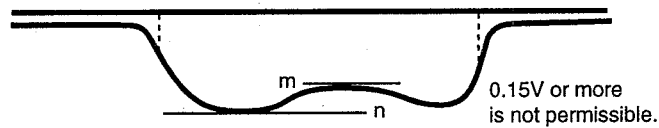


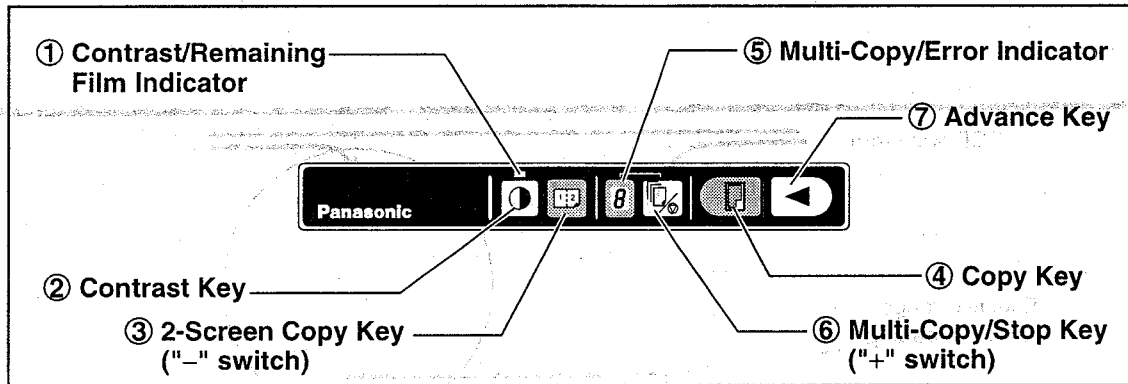
Fig. 8-8



### 8.3.8. Read Start Position (CCD) Adjustment

1. While holding the "Contrast" key pressed, press the "Copy" key ("Advance" key).

#### Control Panel for KX-BP535 and KX-BP635



2. Operate the "-" switch and the "+" switch to adjust the read start position to position ①.  
(At this time, press the "10x" button of the oscilloscope and confirm the waveform.)

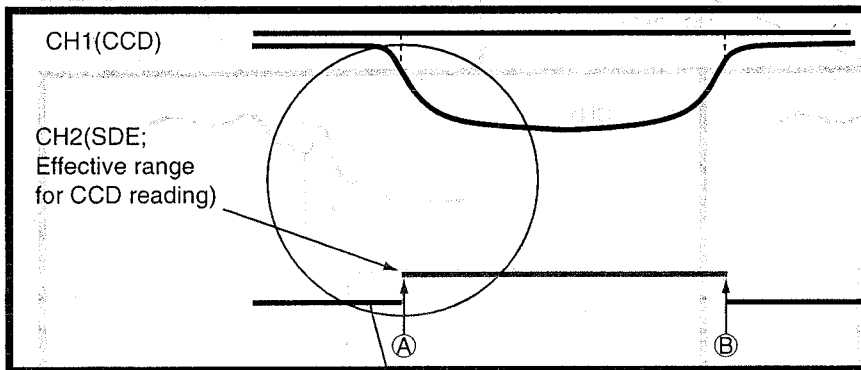


Fig. 8-9

#### Detail

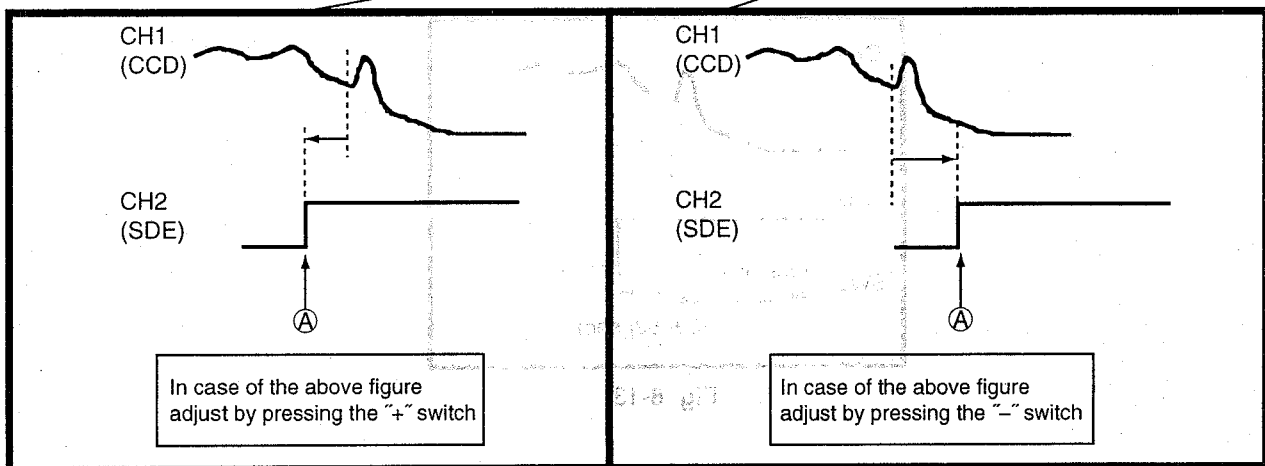
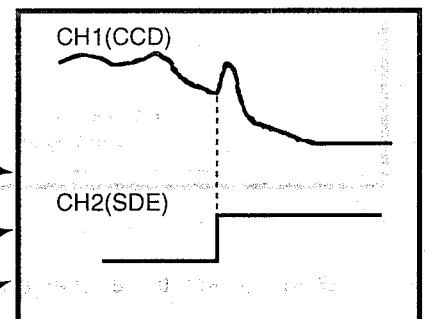


Fig. 8-10

### 8.3.9 Reading Width Adjustment

1. While holding the **"Contrast"** key pressed, press the **"Copy"** key (**"Advance"** key).
2. Operate the **"-"** switch and the **"+"** switch to adjust the read width to the position **Ⓑ**.  
(At this time, press the **"10x"** button of the oscilloscope and confirm the waveform.)

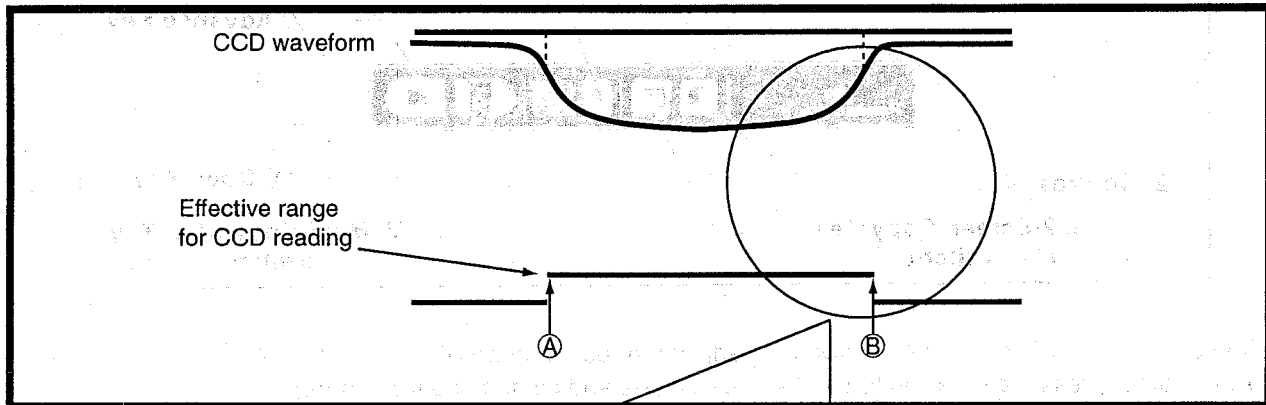


Fig. 8-11

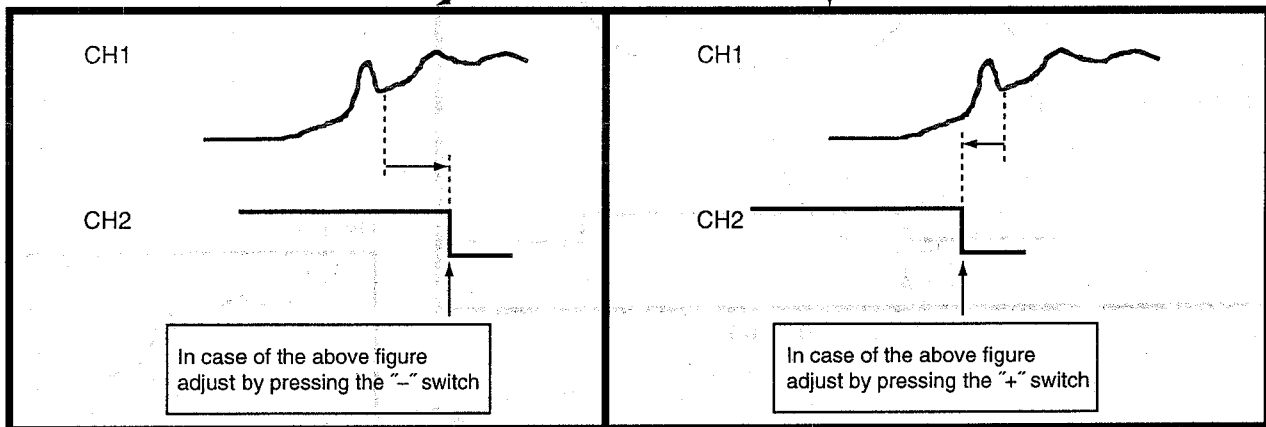


Fig. 8-12

3. Press the **"+"** key three times and shift as shown in the below figure.

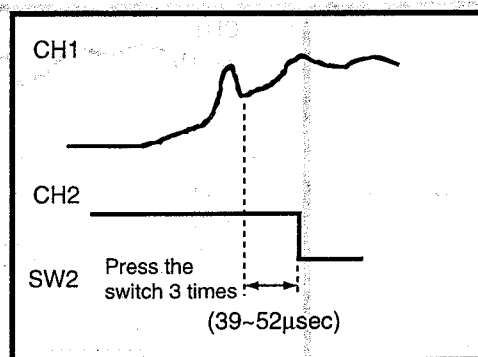


Fig. 8-13

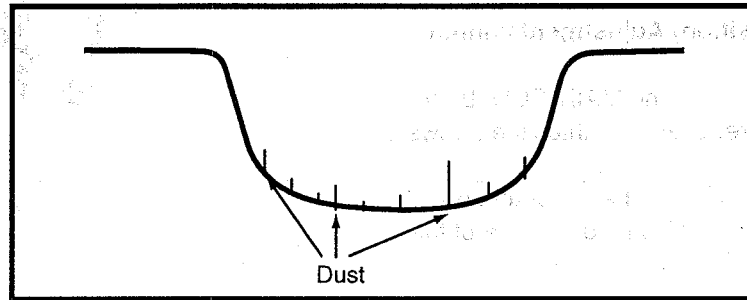
4. While holding the **"Contrast"** key pressed, press the **"Copy"** key (**"Advance"** key). The fluorescent lamp will go out and the Contrast indicator will flash.

### 8.3.10. Confirmation of the Dust

1. Observe the oscilloscope waveform and confirm that the optical system is free of dust, scratches, etc.  
Read the white part of the screen, and confirm that there is no dropping of the waveform other than the screen rule.  
Optical system: Lamp, mirror, optical plate, lens, CCD surface

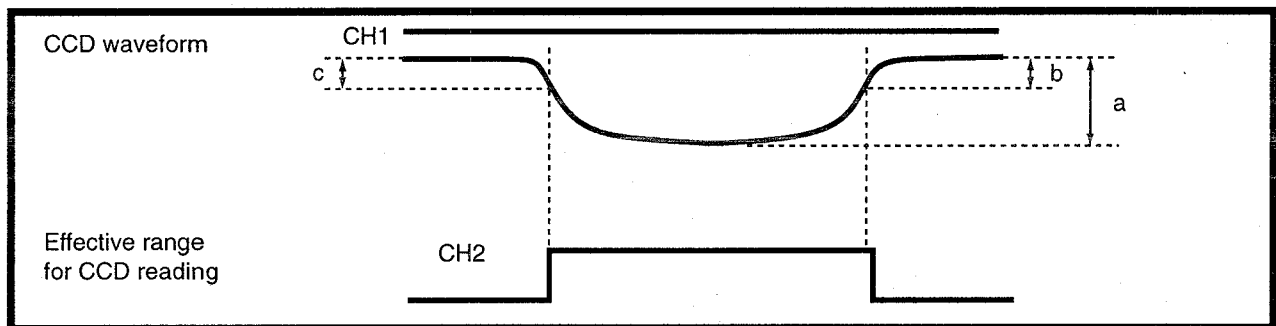
#### Judgment standard

- Confirmation at locations which are not a multiple of the rule (outside the rule).
- At the rule locations, confirmation that the drop of the waveform is not larger than at the other rule locations.



2. When dust etc. has been confirmed, remove it and readjust as required.

### 8.3.11 Confirmation/Adjustment - 1 of the CCD



1. Confirm that the level of the waveform of the edge part of CH2 is 45% or more of the peak potential, as shown in the above figure.

$$b/a \times 100 [\%] \geq 45 [\%] \text{ and } c/a \times 100 [\%] \geq 45 [\%]$$

If they are under 45%, turn off the power and adjust again.

2. While holding the "Contrast" key pressed, press the "Copy" key ("Advance" key). The fluorescent lamp will go out and the Contrast indicator will flash.

### 8.3.12 Other adjustment

If Read Start Position Adjustment or Reading Width Adjustment cannot be done, adjust MAIN (CCD) Board with screw ⑤.

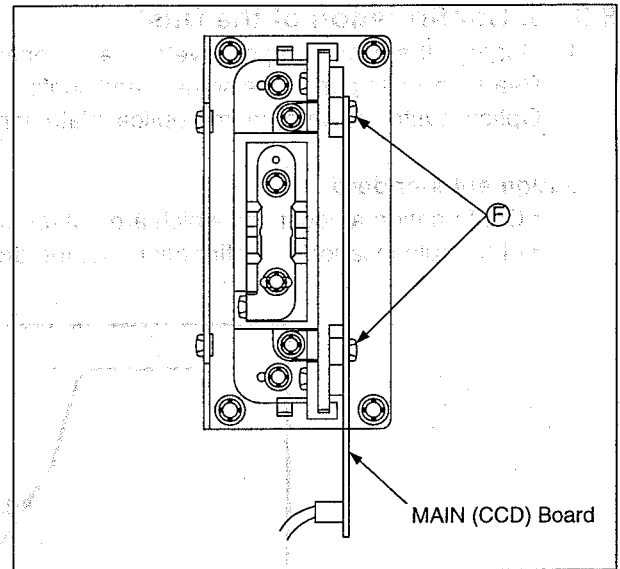
#### (1) Read Start Position Adjustment cannot be done

Loosen the screws ⑤, move the MAIN(CCD) Board down for the play of the screws, and retighten the screws ⑤.

#### (2) Read Width (End Position) Adjustment cannot be done

Loosen the screws ⑤, move the MAIN(CCD) Board up for the play of the screws, and retighten the screws ⑤.

**Note:** After the screws ⑤ have been tightened, perform readjustment from adjustment of the CCD light axis.



## 8.4 Adjust Slice Level between Black and White

### 8.4.1 Present Status: Normal Contrast: Default value 17h

(1) Changing the normal contrast from the present state to one more darker (17h → 18h)

**Note:** Key operations and 7-segment indications shown in brackets apply for the KX-BP735.

1. Switch on the power while holding the "Copy" key ("Advance" key) and the "Advance" key ("Reverse" key) pressed.
2. When  $\overline{H}$  is being displayed, release the switches pressed in ①.
3. Press the "2-Screen Copy" key ("Copy" key) once to display  $\overline{H}$ .
4. Hold the "Contrast" key pressed and press the "Multi-copy" key.  $\overline{I}$  will be displayed.
5. Press the "Multi-copy" key 4 times to display  $\overline{I}$ .
6. Press the "Copy" key ("Advance" key).  $\overline{n}$  will be displayed. → (This " $\overline{n}$ " means current density.)
7. Press the "Multi-copy" key once.  $\overline{o}$  will be displayed. → (One more darker.)
8. Press the "Copy" key ("Advance" key).  $\overline{n}$  will be displayed. → (One more darker status is stored.)
9. After completion, switch OFF the power.

### 8.4.2 Present Status: Dark Contrast: Default value 1Ah

(1) Changing the dark contrast from the present state to one more lighter (1Ah → 19h)

1. The procedure is the same as for the steps ① – ④ of the above item 8.4.1.
2. Press the "Multi-copy" key 5 times to display  $\overline{n}$ .
3. Press the "Copy" key ("Advance" key).  $\overline{q}$  will be displayed. → (This " $\overline{q}$ " means current density.)
4. Press the "2-screen Copy" key ("Copy" key) once.  $\overline{p}$  will be displayed. → (One more lighter.)
5. Press the "Copy" key ("Advance" key).  $\overline{n}$  will be displayed. → (One more lighter status is stored.)
6. After completion of the change, switch off the power.

	Lighter ←				→ Darker			
Contrast	15h	16h	17h	18h	19h	1Ah	1Bh	1Ch
Display (7 seg.)	$\overline{L}$	$\overline{n}$	$\overline{n}$	$\overline{o}$	$\overline{p}$	$\overline{q}$	$\overline{r}$	$\overline{s}$
Comment			Normal Default			Dark Default		

## SECTION 9

# TROUBLESHOOTING

### 9.1 Faulty Function

#### Symptom

- 7- segment LED does not turn ON.....(A)
- Key input does not operate. ....(B)
- The paper empty display lamp "P" does not operate. (Problem in the paper sensor) .....(C)
- Problem with screen feed. ....(D)
- Problem with paper feed. ....(E)
- Problem with fluorescent lamp. (Indicates "L" Error).....(F)
- Problem with Home Sensor. ....(G)

Check from the first symptom in alphabetical order.

#### (A) 7- segment LED does not turn ON.

Check the +5V power. This will tell you whether or not the problem is in the switching power supply system. For a load circuit/short-circuit do not forget to check when there is no load on the switching power supply (disconnect the output harnesses). Also, please check the SUB Board and the PANEL Board.

#### (B) Key input does not operate.

In this case as well, first check the +5V power. Next, it is necessary to check the SUB Board and the PANEL Board.

#### (C) The paper empty display lamp "P" does not operate.

The 7-segments LED should display (turn ON) and when paper is empty, the 7-segment LED should display "P" and should flash ON and OFF.

If the LED does not turn ON, check the SUB Board. One section which should be checked is the 54 pin on IC4. This pin must be at +5V when paper is empty, and must be at 0V when paper exists.

#### (D) Problem with screen feed.

It is first necessary to check mechanical points. Are the motor and gears installed properly? Next check the input and output of the motor driver (IC500).

#### (E) Problem with paper feed.

In this case as well it is first necessary to check mechanical points. Then check the input and output of the motor driver (IC600, IC601).

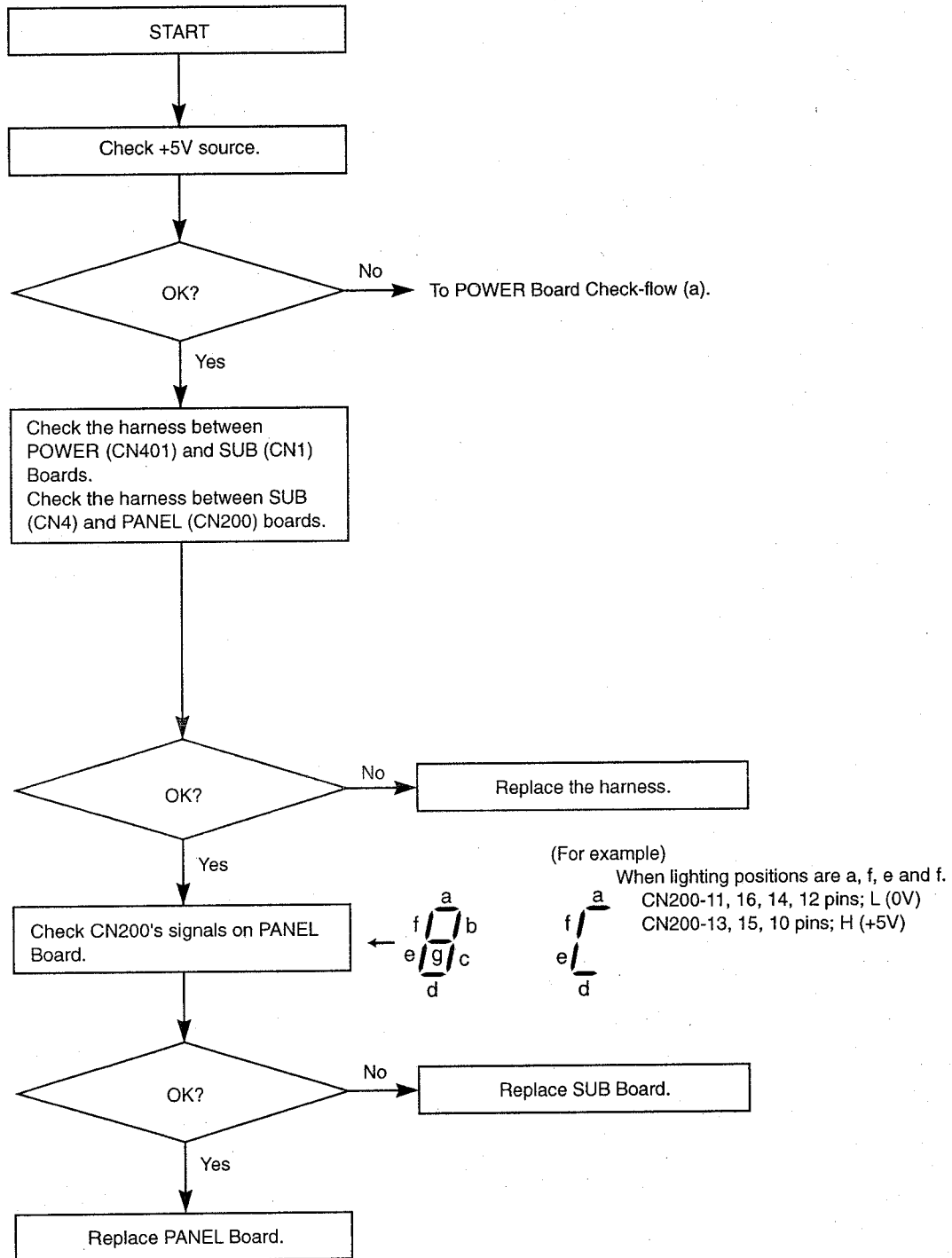
#### (F) Problem with fluorescent lamp.

It is necessary to check the input signal LAMPON, PHEAT and the +25V power on LAMP DRIVER Board. If there is no problem, fluorescent lamp in itself or the lamp driver circuit will be damaged.

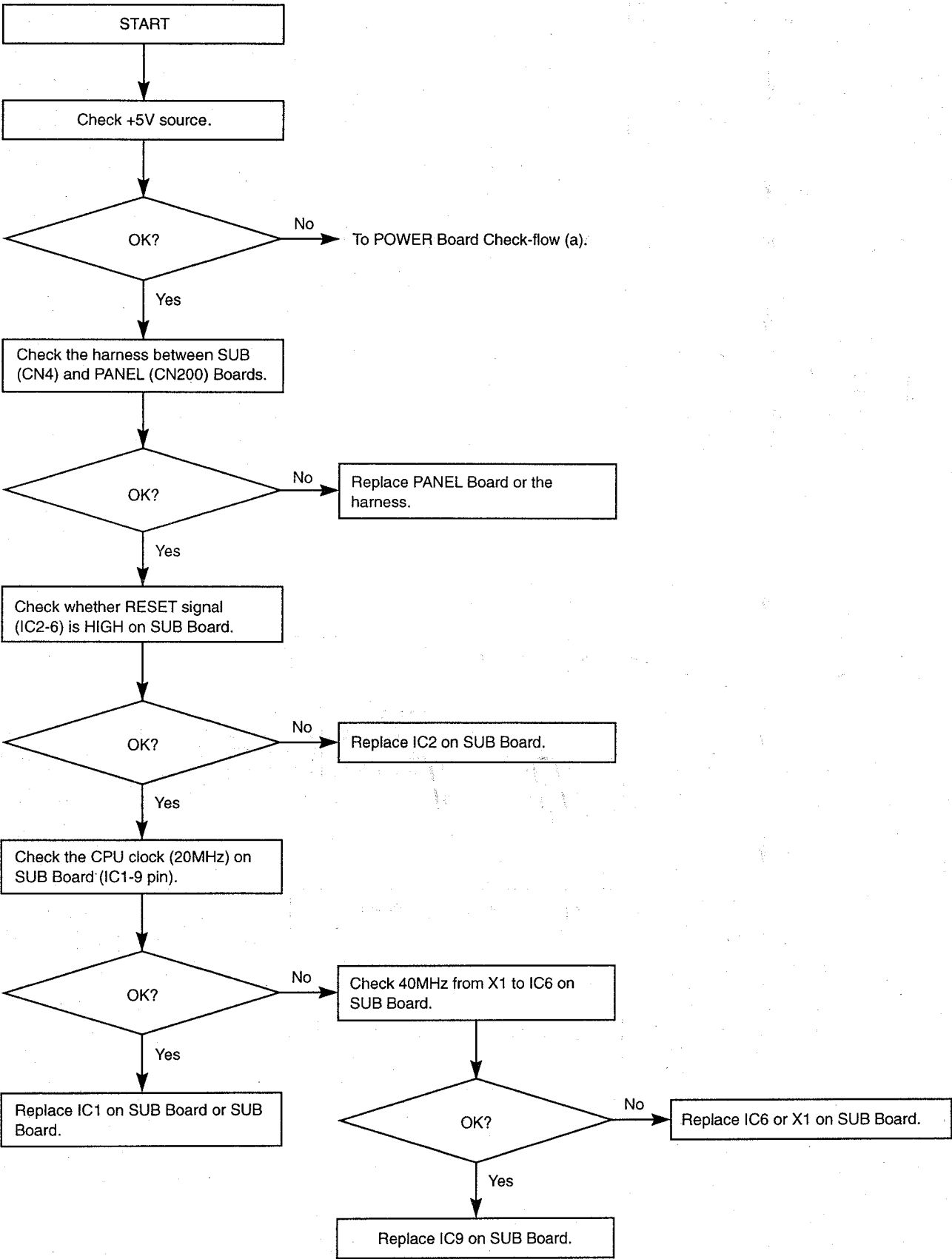
#### (G) Problem with Home Sensor.

First, check the screen condition, the screen home sensor may not be able to detect the screen home position correctly, if the screen is loosened. If the screen does not stop, but keeps moving, check the screen tension and adjust the mounting position of the roller mounting fitting on the right side. Also check that the black home position mark has been attached correctly at the bottom of the screen. If there is no structural problem, check the HOME SENSOR Board, and then check SENSST, pin62 of IC1 on the SUB Board.

(A) 7-segment LED does not turn ON

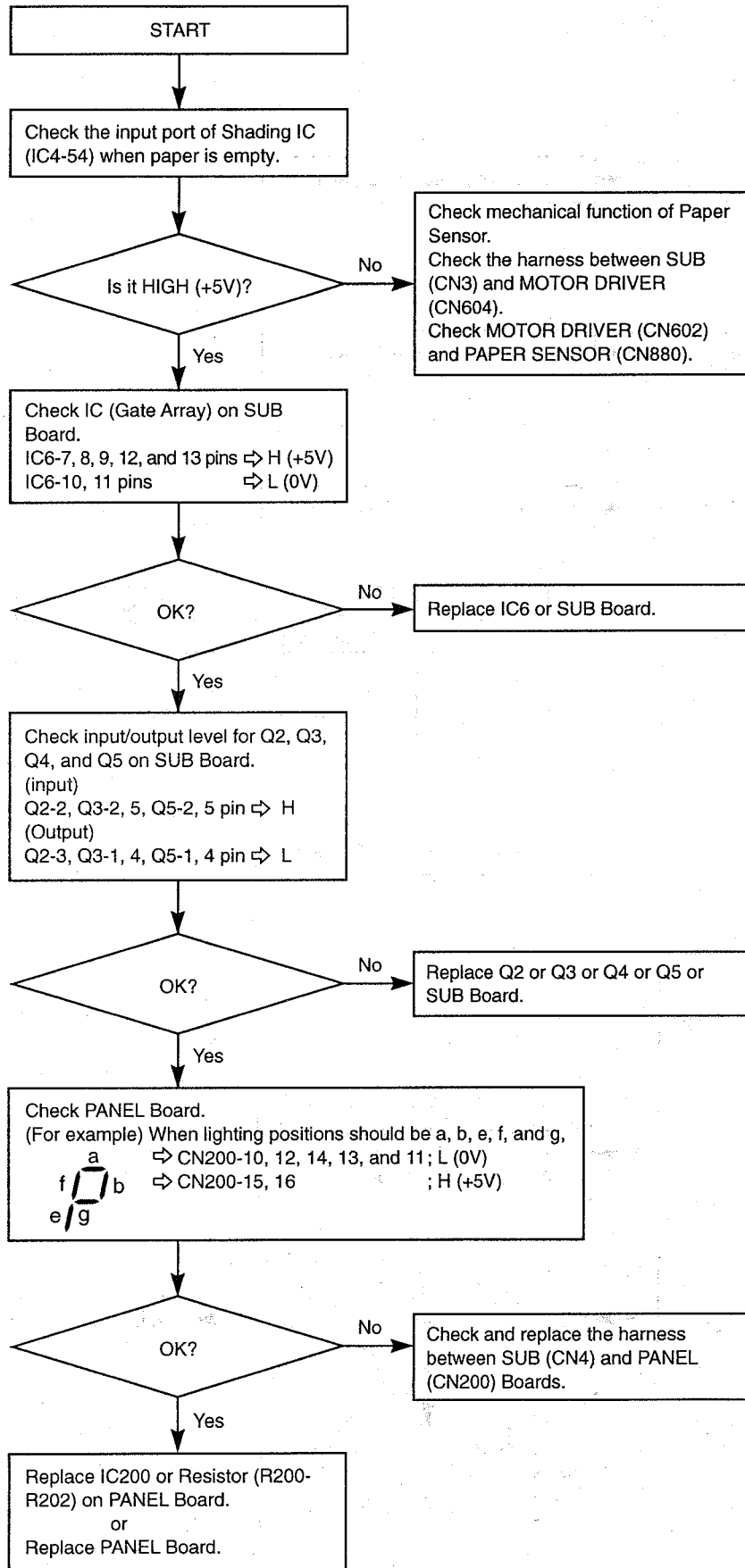


(B) Key input does not operate

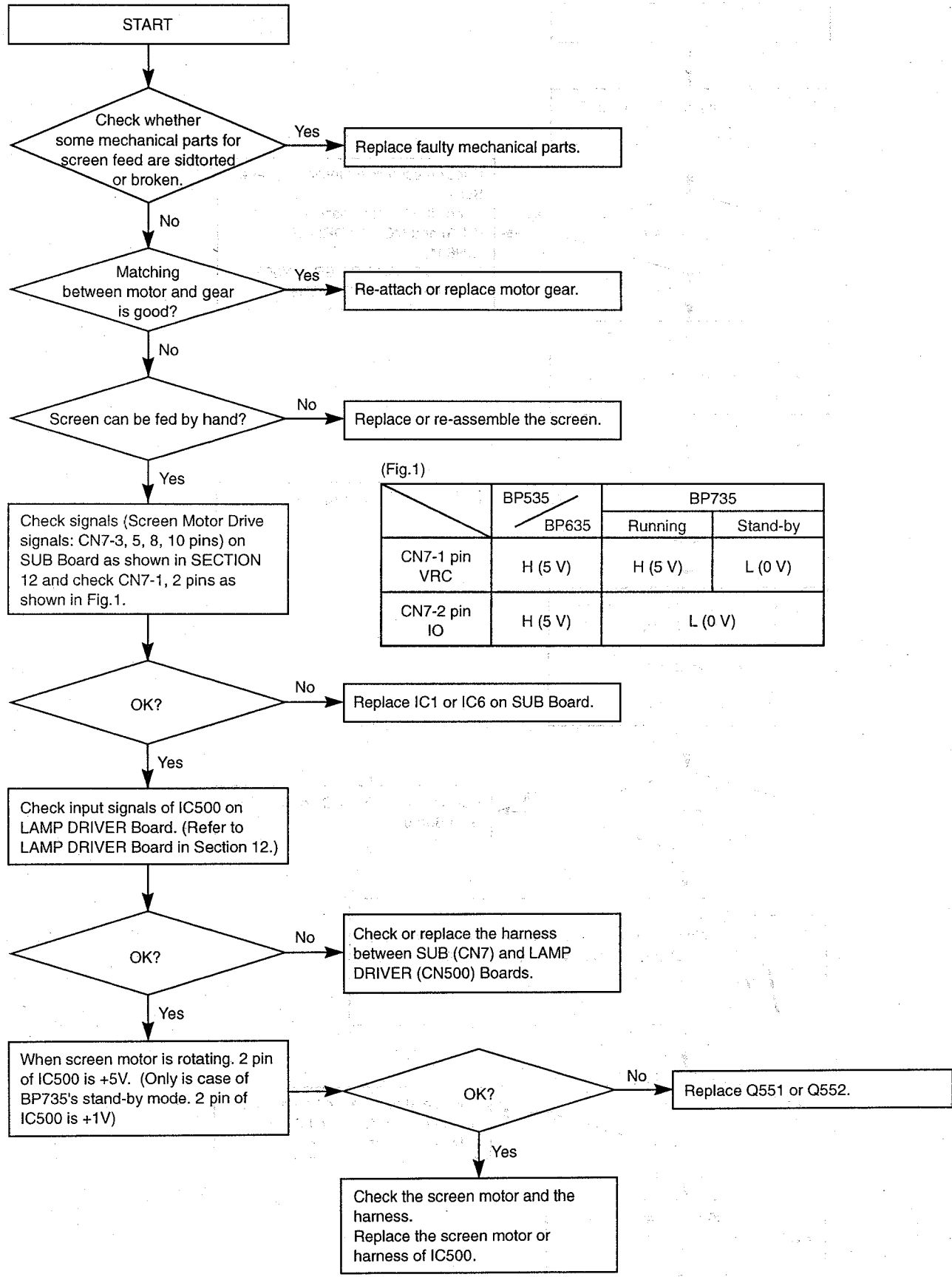




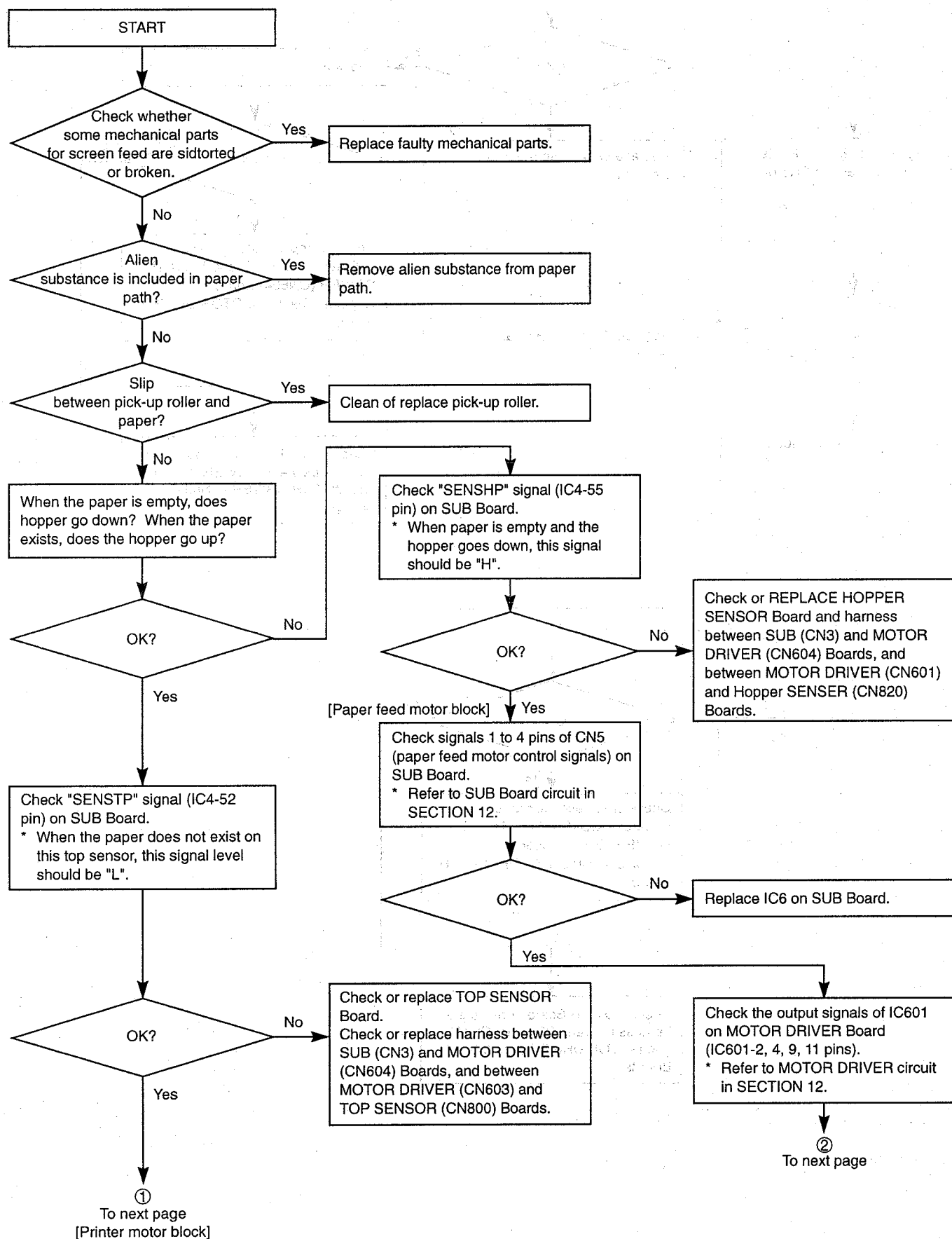
## (C) The paper empty display lamp "p" does not operate.



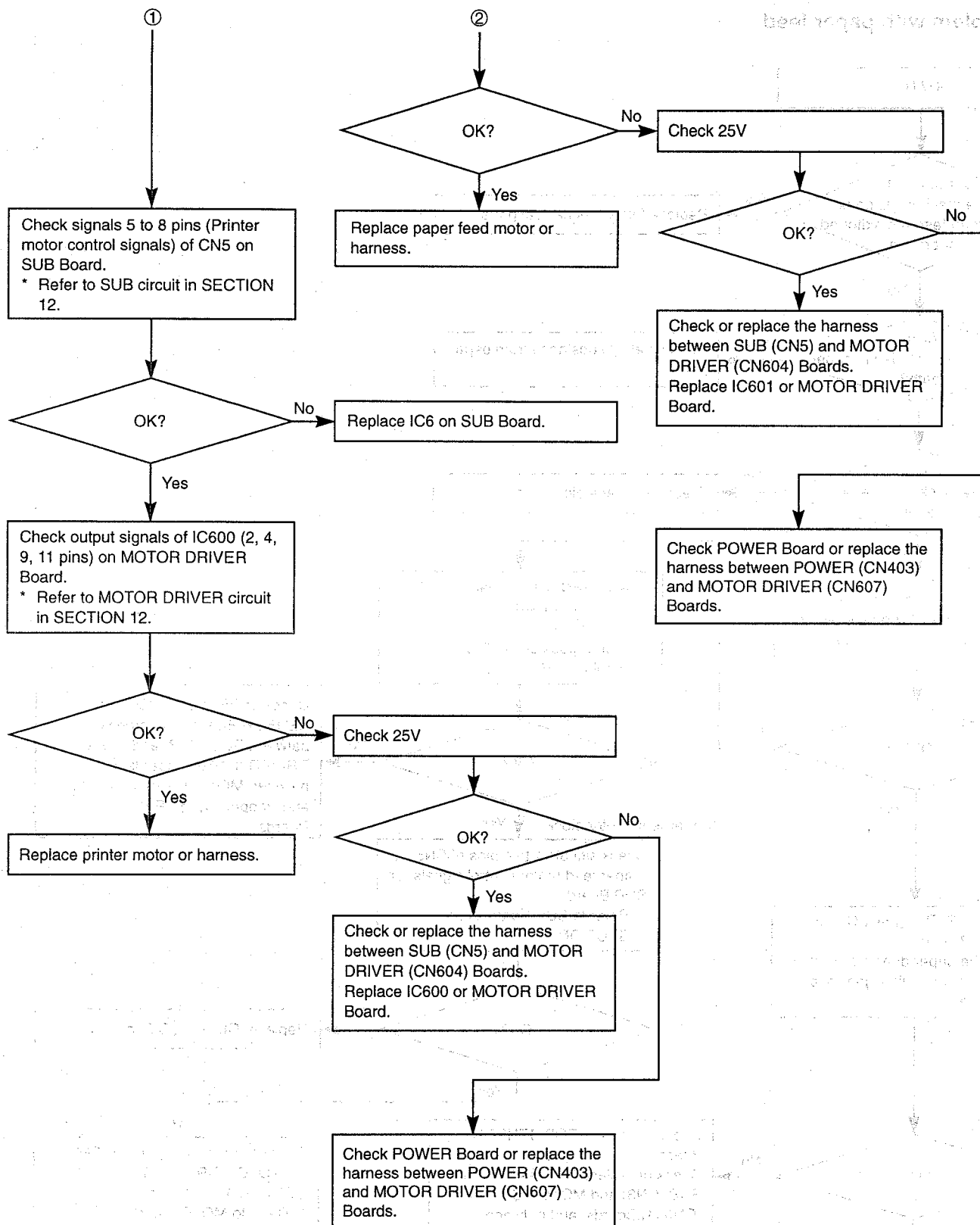
(D) Problem with screen feed



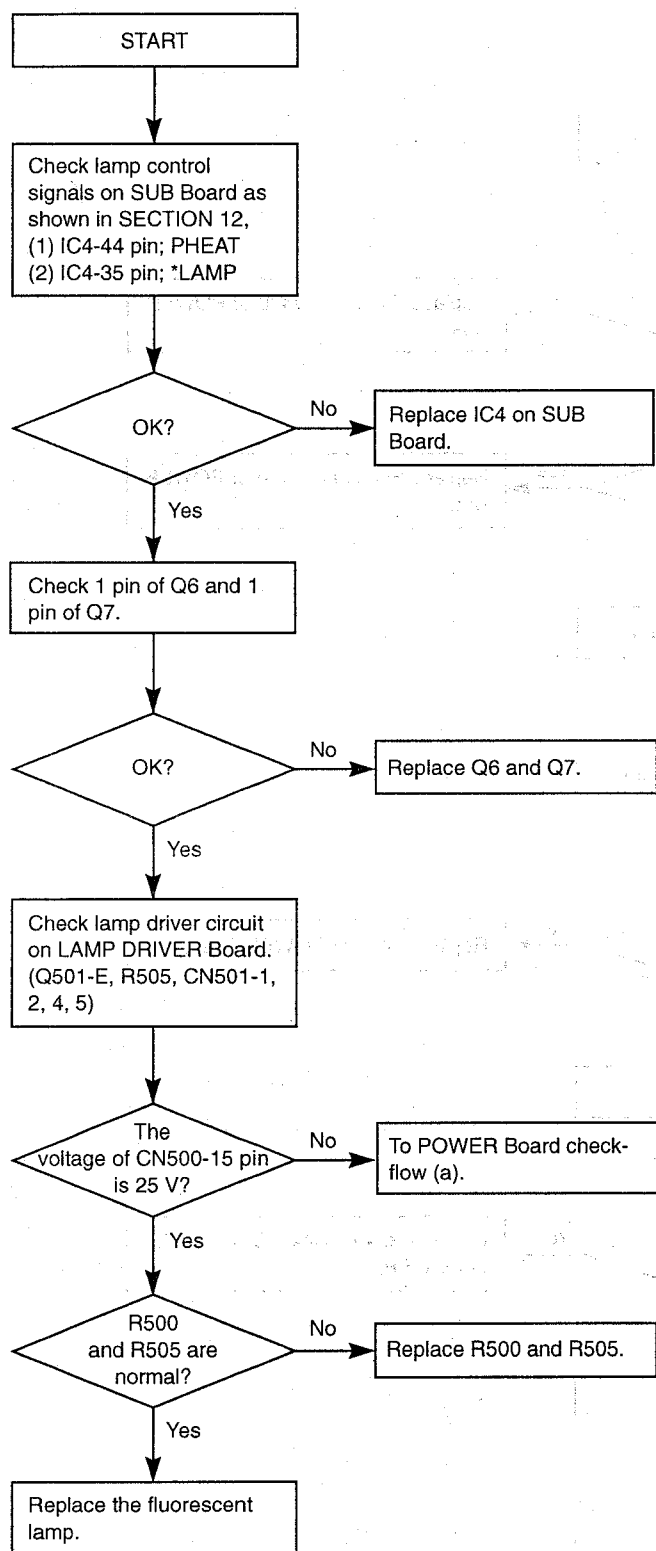
## (E) Problem with paper feed



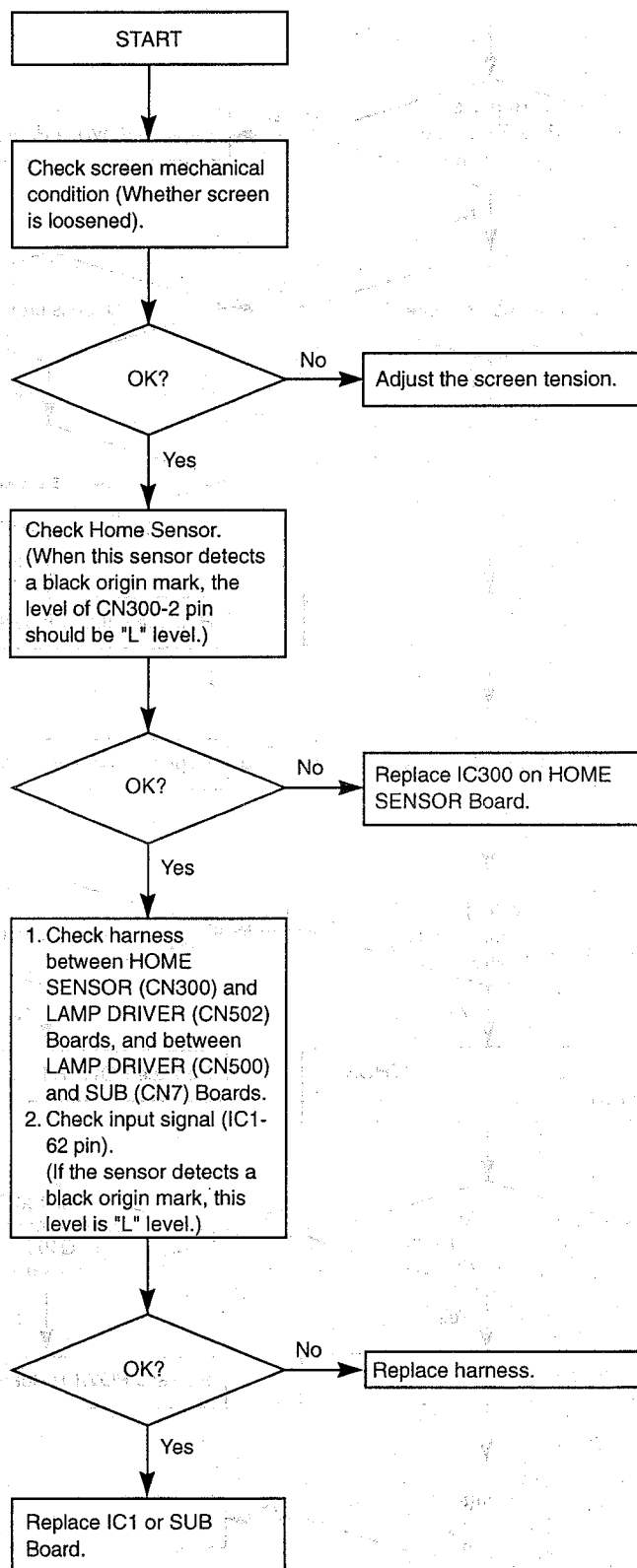
# KX-BP535/BP635/BP735 Series



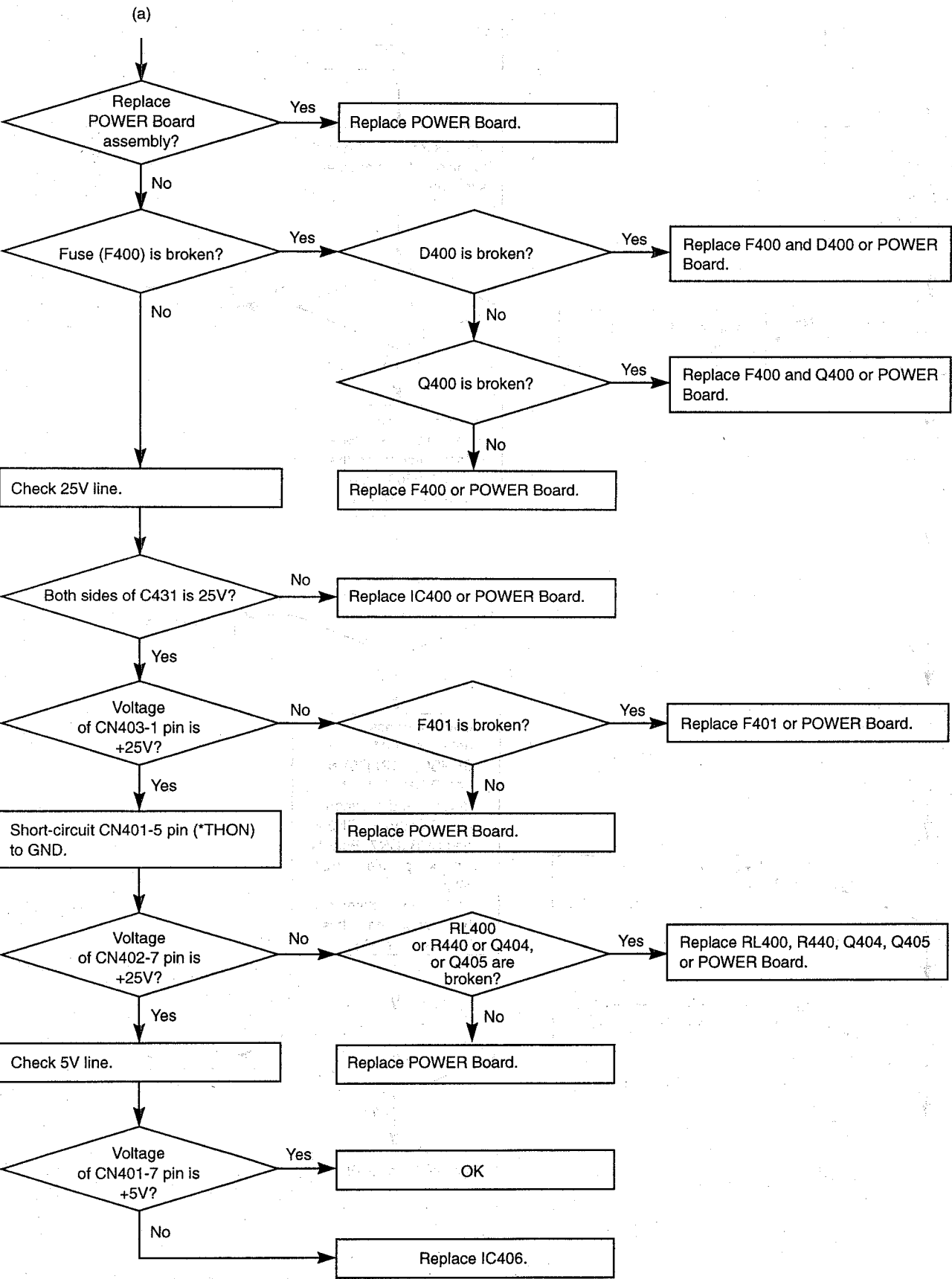
**(F) Problem with fluorescent lamp  
(Indicates "L" Error)**



**(G) Problem with Home Sensor**



■ POWER Board check-flow (a)



## 9.2 Copy Trouble

### Symptom

No printing .....	(A)
All black .....	(B)
Dark printing .....	(C)
Light printing .....	(D)
Density difference between right and left .....	(E)
White line .....	(F)
White band .....	(G)
Black line .....	(H)
Black band .....	(I)

When the above symptoms are used for troubleshooting, it is first of all necessary to judge whether it is a scanning problem or a printing problem. The following procedure makes it easy to decide where the problem is located.

### 1. Checking for printing trouble

Perform test mode (F). A test pattern will be printed in about 20 seconds.

If the above symptoms are reproduced, it is a printing problem, and if not, it can be assumed to be a scanning problem.

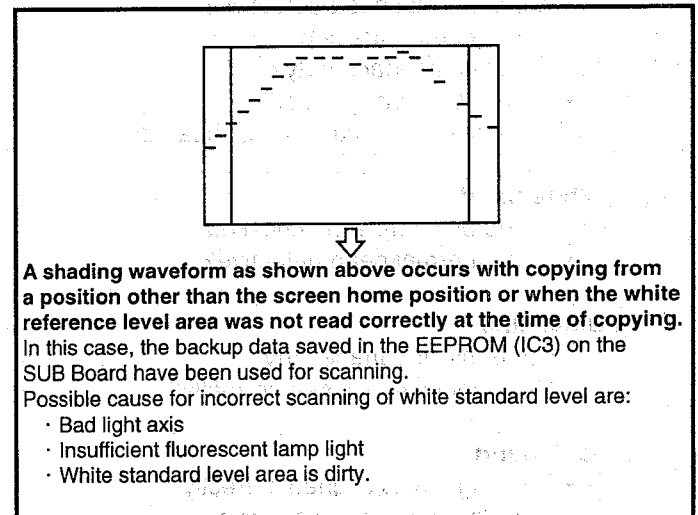
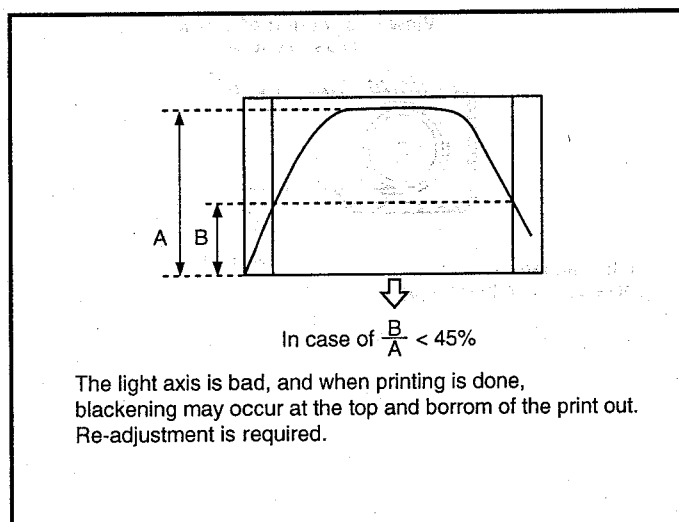
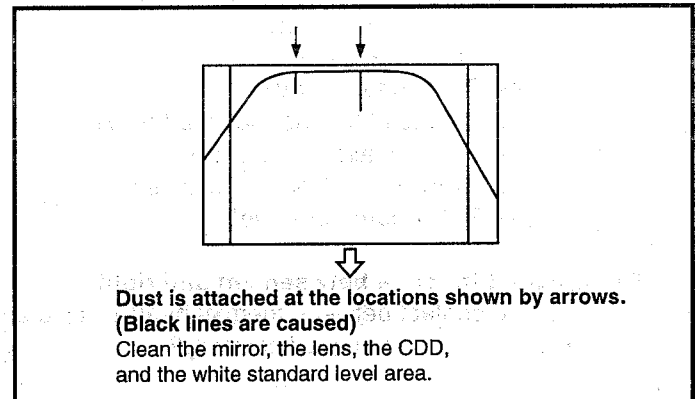
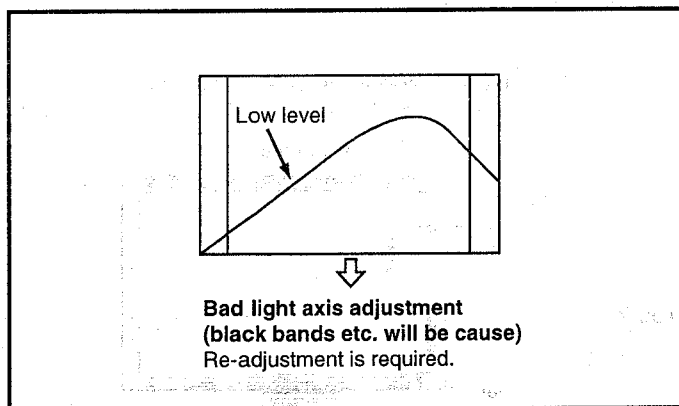
### 2. Checking for scanning trouble

First, make a copy and reproduce the above symptoms. Then, without turning OFF the power, hold the "Multi-copy/Stop" key pressed and press the "Copy" key (the "Advance" key in case of the KX-BP735).

(The number on the 7-segment LED will increase, but this should be disregarded.)

In about 20 seconds, the shading waveform used for the preceding copy will be printed.

Shading waveform examples and countermeasures are shown below.



Perform the following inspections under consideration of the above.

First, check the mechanical condition.

Next, the thermal head signal (CN6) and the power supply (CN402) must be inspected.

Then inspect the thermal head "THON" signal of the SUB Board CN1. This must be 0 V during printing. Checking this point makes it clear whether there is a problem of the thermal head or not.

When all inspection results are normal, the thermal head is defective.

When the results are not normal, inspect the MAIN Board and the SUB Board.

#### **(A) No printing**

The thermal head printing signal must be checked. This shows whether the thermal head is defective or not.

#### **(B) All black**

- It is rare case that the print-out data becomes all black because of a defect of the thermal head.
- MAIN (CCD) Board and/or the SUB Board have some problems.

#### **(C) Dark printing**

Check the following items.

- Is the light axis correct?
- Is there light from the fluorescent lamp?
- Is the MAIN (CCD) Board defective?
- Is the control circuit board defective?
- Is there a mechanical defect of the screen?
- When there is a chart, attach it correctly.

#### **(D) Light printing**

Check the following items.

- Is the contact between thermal head and platen correct?
- Is the surface of the white reference level area of the screen dirty?
- Is the mirror surface dirty?
- Is the lens surface dirty?
- Is the CCD surface dirty?
- Is the surface of the thermal head dirty?
- Is the light axis aligned correctly?
- Is the MAIN (CCD) Board defective?
- Is the SUB Board defective?

#### **(E) Density difference between left and right**

- Is the contact between thermal head and platen correct?
- Is the light axis aligned correctly?

#### **(F) White line**

- Is the thermal head defective?
- Is the mirror surface dirty?
- Is the lens surface dirty?
- Is the CCD surface dirty?
- Is the surface of the thermal head dirty?

#### **(G) White band**

The strobe pulse must be checked.

- Is the thermal head defective?

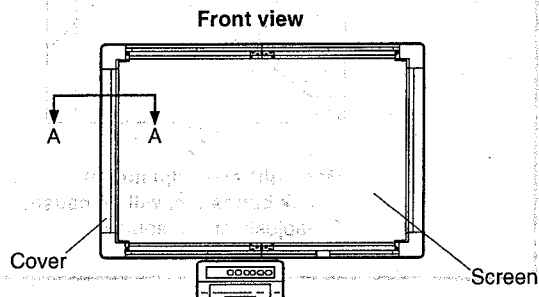
#### **(H) Black line**

- Is the mirror surface dirty?
- Is the light axis aligned correctly?

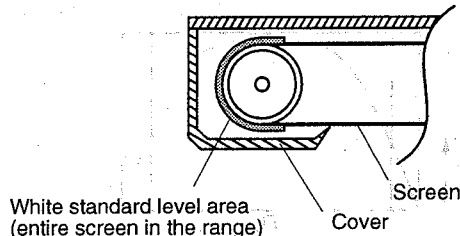
#### **(I) Black band**

- Is the light axis aligned correctly?
- Is the thermal head defective?

**White standard level area**  
This is the area at the left side of the screen, hidden by the escutcheon when the screen is stopped.

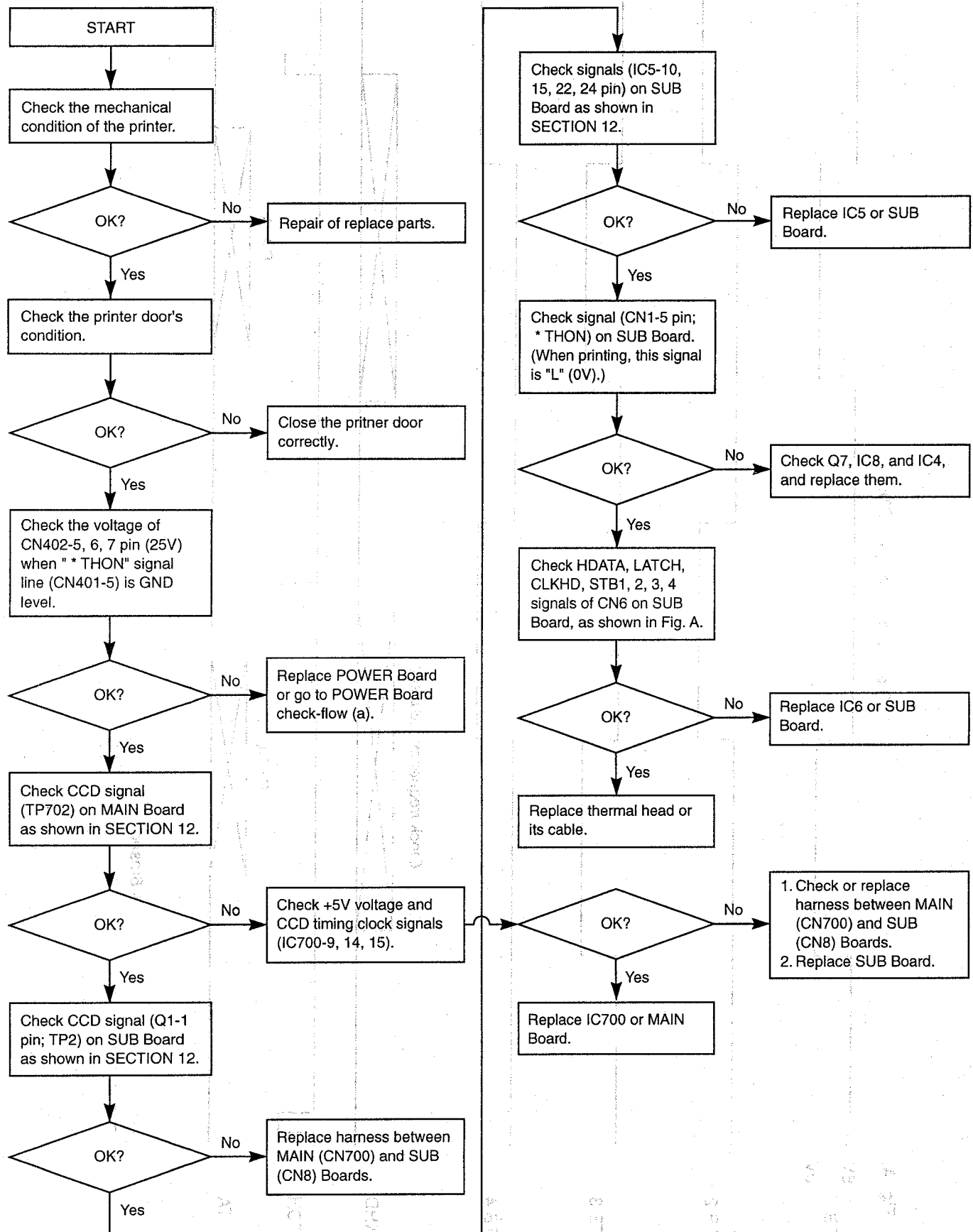


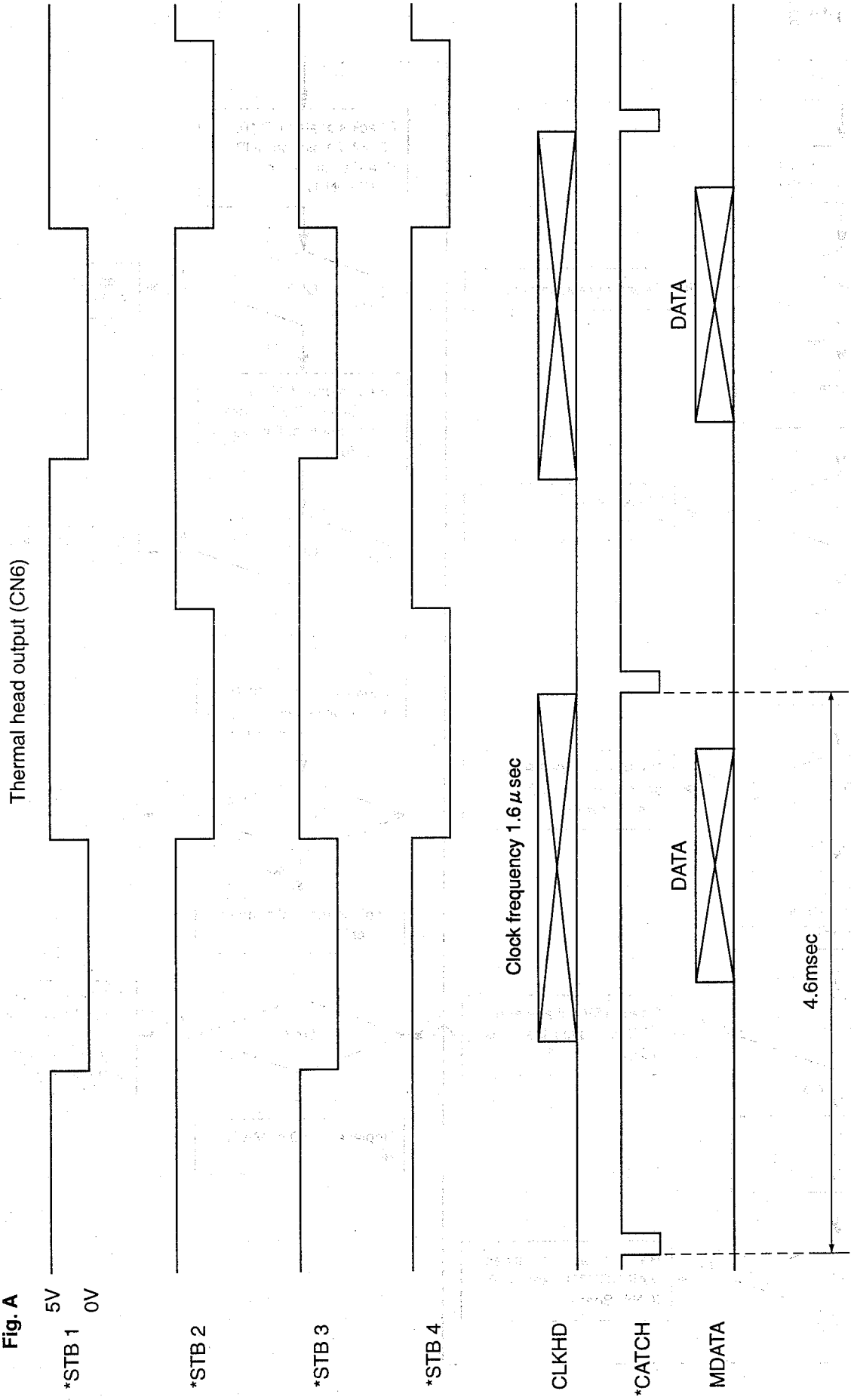
**View in direction of arrow A  
(across section)**



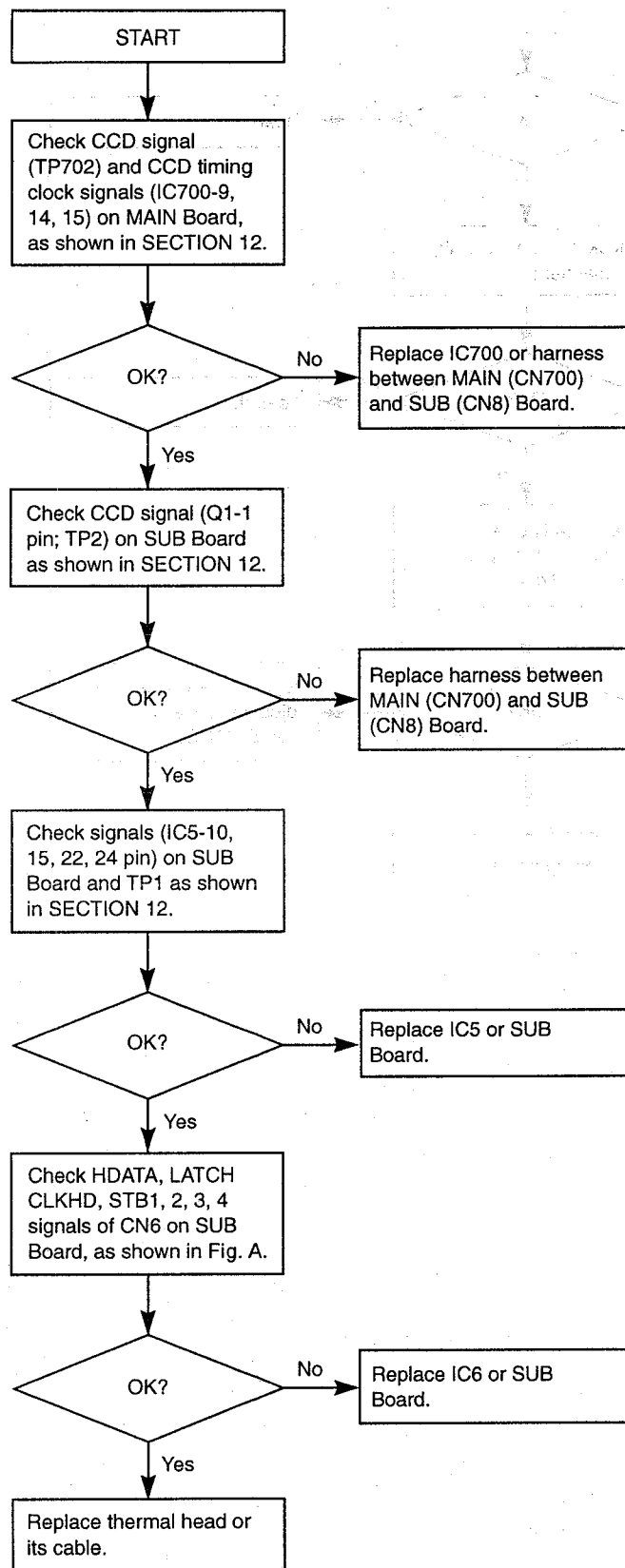


# (A) No printing

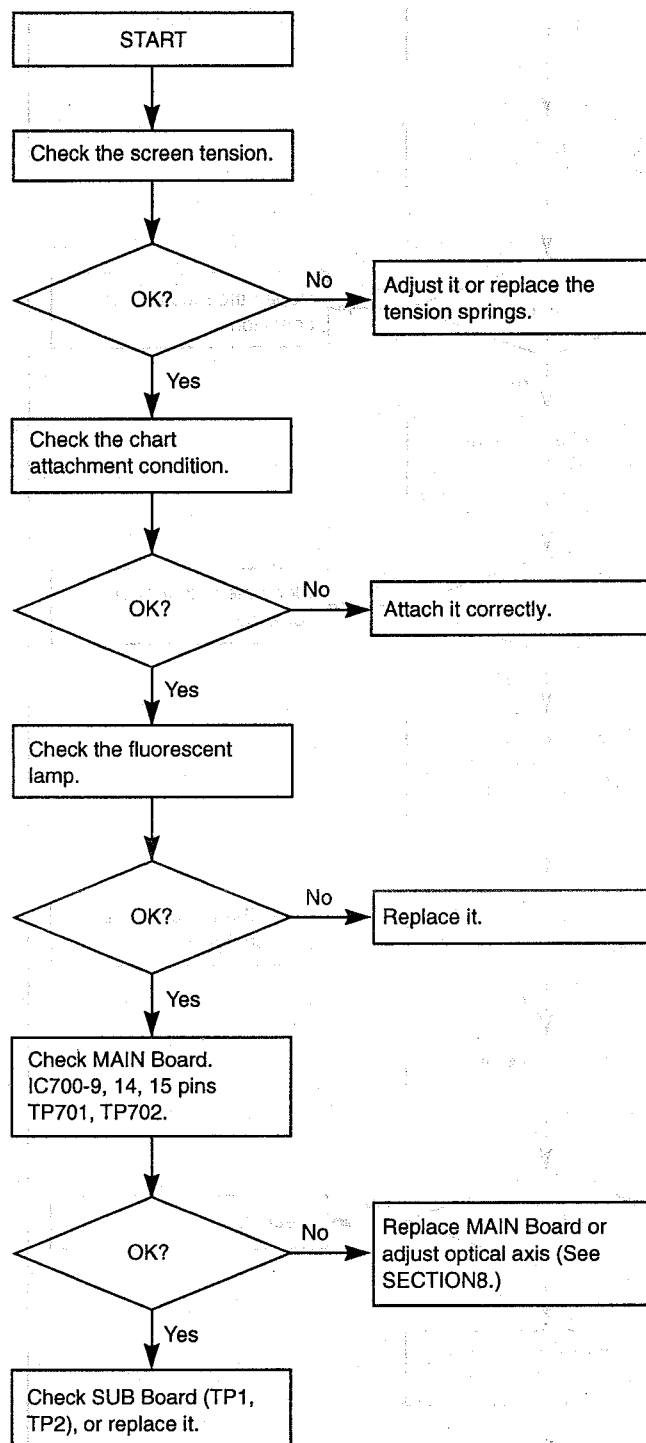




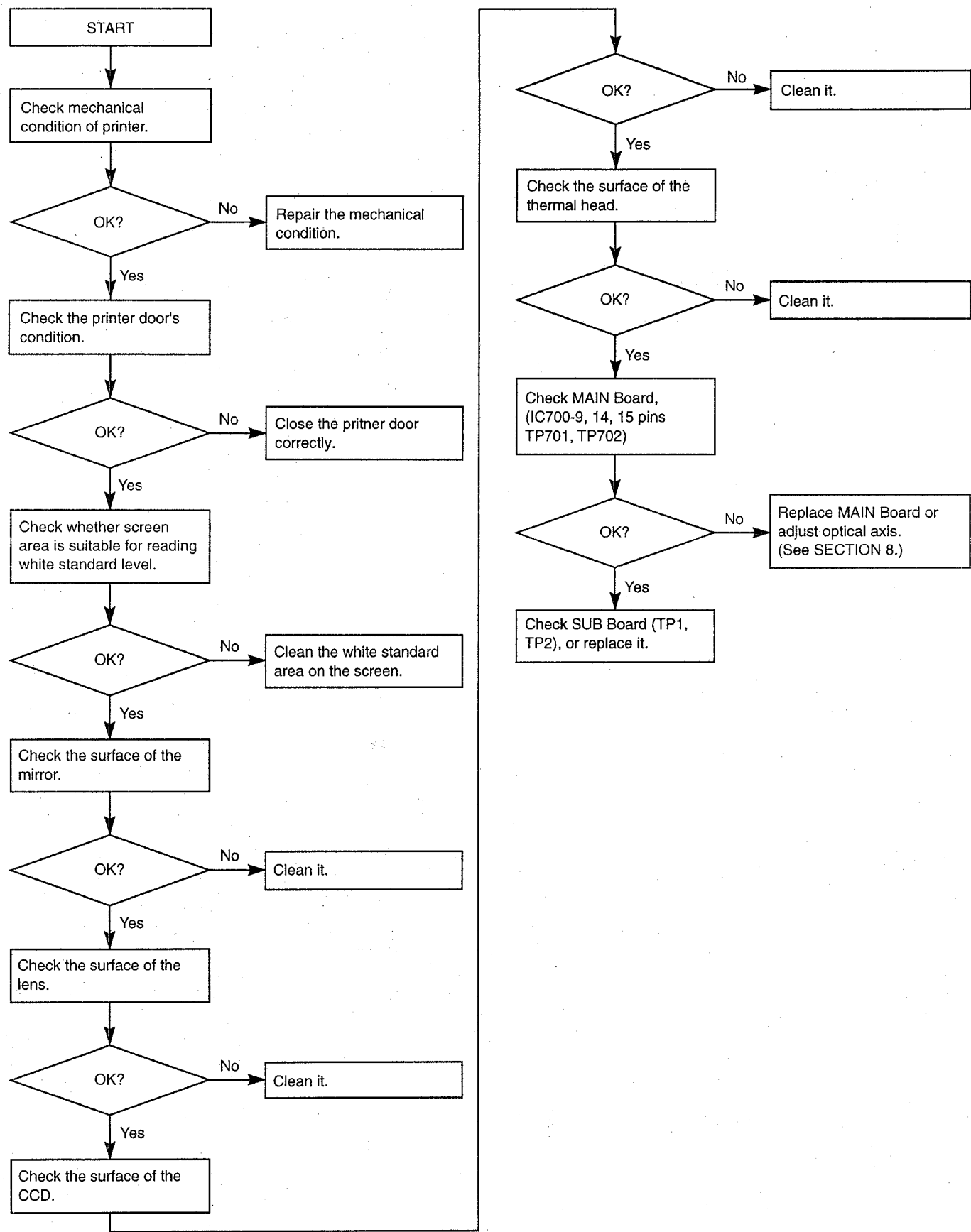
# (B) All black



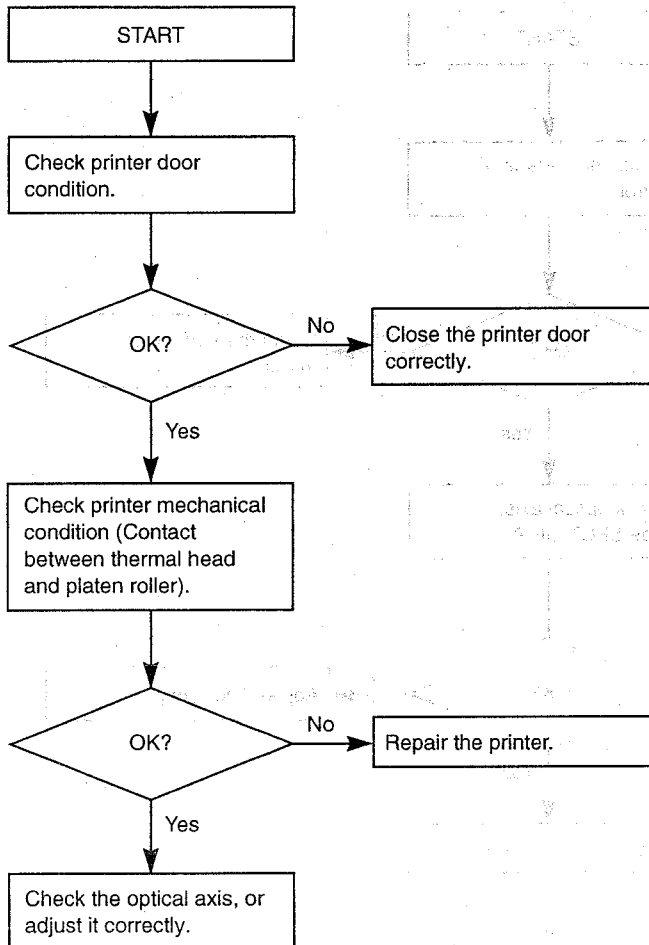
# (C) Dark printing



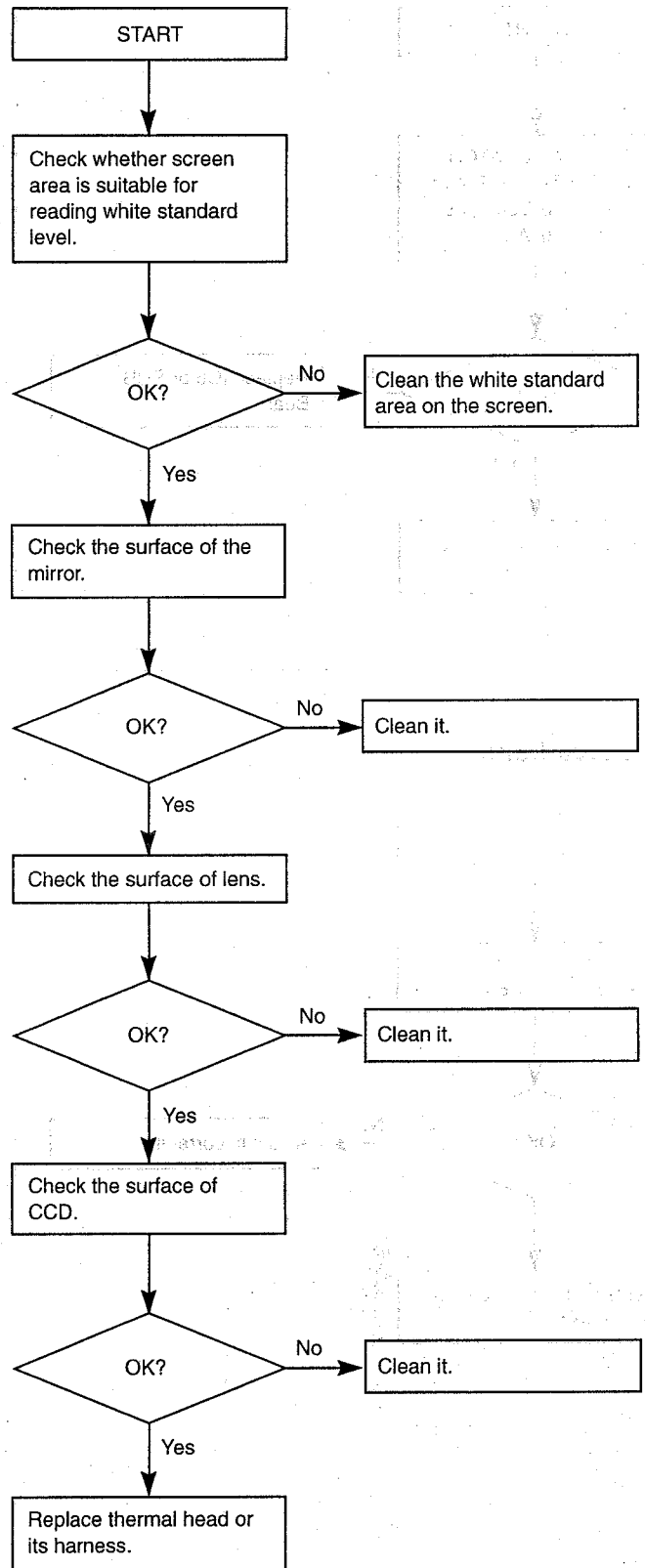
(D) Light printing



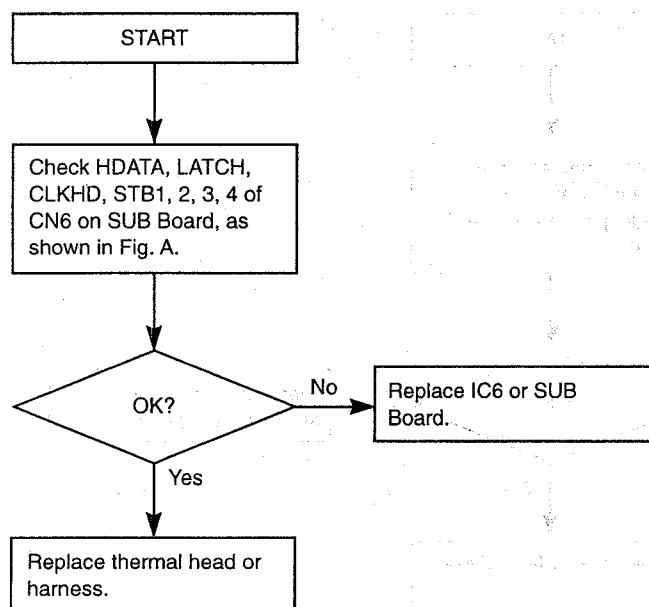
### (E) Density difference between right and left



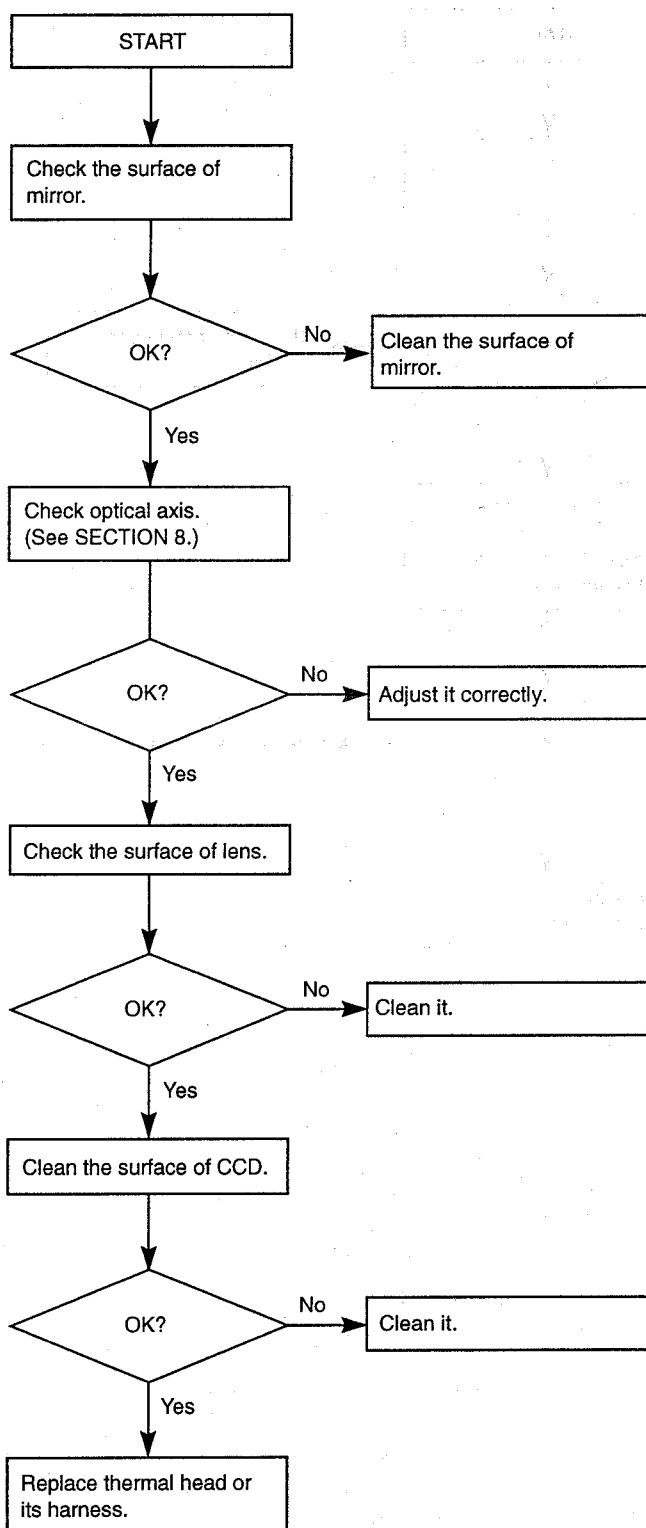
### (F) White line



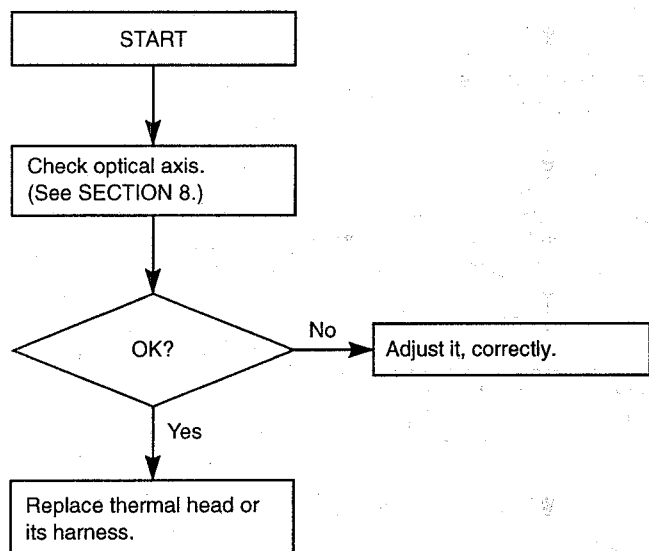
**(G) White band**



**(H) Black line**



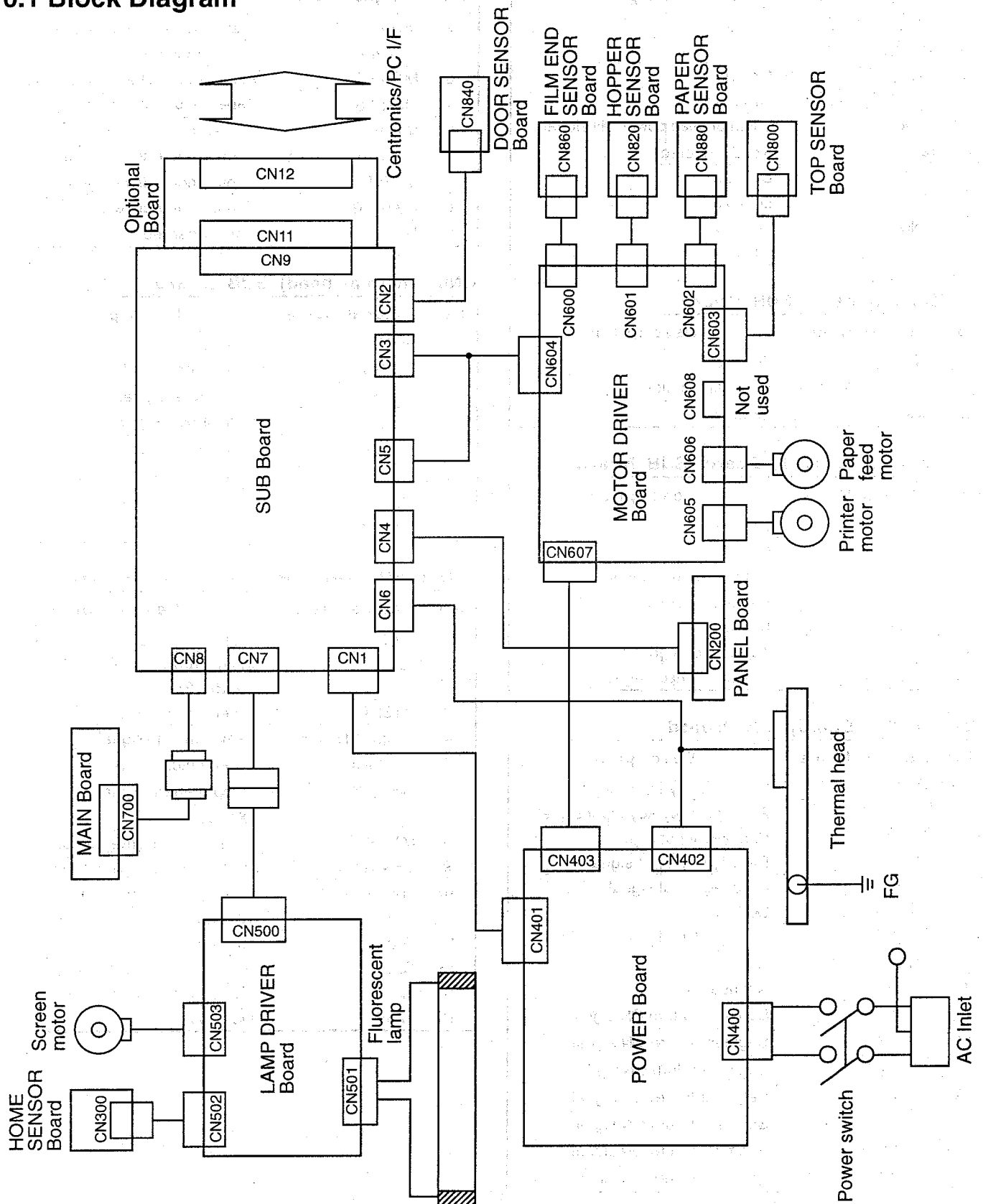
**(I) Black band**



## SECTION 10

### BLOCK DIAGRAM

#### 10.1 Block Diagram



## 10.2 Explanation of Connectors

**Note:** Signal names which begin with asterisk (\*) indicate that the corresponding signal is LOW When active.

### CN1 [Power] SUB Board

No.	Signal Name	Description
1	+25V	DC +25V
2	+25V	DC +25V
3	GND	Ground
4	GND	Ground
5	*THON	Thermal head power ON signal
6	NC	Not connected
7	+5V	DC +5V
8	+5V	DC +5V
9	GND	Ground
10	GND	Ground

### CN2 [Door Sensor] SUB Board

No.	Signal Name	Description
1	+5V	DC +5V
2	*SENDOOR	Door sensor signal
3	GND	Ground

### CN3 [MOTOR DRIVER Board] SUB Board

No.	Signal Name	Description
1	+5V	DC +5V
2	GND	Ground
3	*SENHP	Hopper sensor signal
4	SENPA	Paper sensor signal
5	SENPD	Not used
6	SENTP	Top sensor signal
7	SENEND	Film end sensor signal

### CN4 [PANEL Board] SUB Board

No.	Signal Name	Description
1	CNTUP	Count-up key input signal
2	D-COPY	2-screen copy key input signal
3	COPY	Print key input signal
4	DENSITY	Density key input signal
5	FEED	Feed key input signal
6	+5V	DC +5V
7	*LEDDEN	LED turn ON signal
8	GND	Ground
9	*REMOTE	Not used
10	*7SEGG	Segment-G turn ON signal
11	*7SEGA	Segment-A turn ON signal
12	*7SEGF	Segment-F turn ON signal
13	*7SEGB	Segment-B turn ON signal
14	*7SEGE	Segment-E turn ON signal
15	*7SEGC	Segment-C turn ON signal
16	*7SEG D	Segment-D turn ON signal

### CN5 [MOTOR DRIVER Board] SUB Board

No.	Signal Name	Description
1	MTPFA	Paper feed motor drive signal
2	*MTPFA	Paper feed motor drive signal
3	MTPFB	Paper feed motor drive signal
4	*MTPFB	Paper feed motor drive signal
5	MTPPA	Printer motor drive signal
6	*MTPPA	Printer motor drive signal
7	MTPPB	Printer motor drive signal
8	*MTPPB	Printer motor drive signal
9	N.C.	Not connected

### CN6 [Thermal head] SUB Board

No.	Signal Name	Description
1	HDATA	Head data signal
2	*LATCH	Head latch signal
3	CKDHD	Head clock signal
4	*STB4	Data strobe signal 4
5	*STB3	Data strobe signal 3
6	*STB2	Data strobe signal 2
7	*STB1	Data strobe signal 1
8	THERM	Thermal head temperature signal

### CN7 [LAMP DRIVER Board] SUB Board

No.	Signal Name	Description
1	VRC	Stand by signal for KX-BP735
2	IO	Motor current set signal for KX-BP735
3	MTSHA	Screen motor drive signal
4	*LAMPON	Lamp turn ON signal
5	*MTSHA	Screen motor drive signal
6	*PHEAT	Lamp preheat signal
7	+5V	DC +5V
8	MTSHB	Screen motor drive signal
9	SENST	Screen home sensor signal
10	*MTSHB	Screen motor drive signal
11	GND	Ground
12	GND	Ground
13	GND	Ground
14	+25V	DC +25V
15	+25V	DC +25V



## CN8 [MAIN Board] SUB Board

No.	Signal Name	Description
1	GND	Ground
2	CCD	CCD sensor signal
3	GND	Ground
4	CLK2	CCD clock 2
5	SDE	Serial data enable signal
6	CLK1	CCD clock 1
7	CCDTG	CCD reset clock
8	AVDD	Analog DC +5V

## CN9 [PC I/F] SUB Board

No.	Signal Name	Description
1	GND	Ground
2	+5V	DC +5V
3	A16	Address A16
4	A14	Address A14
5	A12	Address A12
6	A10	Address A10
7	A8	Address A8
8	+5V	DC +5V
9	A6	Address A6
10	A4	Address A4
11	A2	Address A2
12	A0	Address A0
13	+5V	DC +5V
14	+5V	DC +5V
15	D6	Data D6
16	D4	Data D4
17	+5V	DC +5V
18	D2	Data D2
19	D0	Data D0
20	+5V	DC +5V
21	+5V	DC +5V
22	OPENB	Enable signal for PC I/F Board
23	PLH	Peripheral logic high signal
24	+5V	DC +5V
25	+5V	DC +5V
26	CENTD2	Data 2 of centronics
27	CENTD4	Data 4 of centronics
28	GND	Ground
29	CENTD6	Data 6 of centronics
30	CENTD8	Data 8 of centronics
31	+5V	DC +5V
32	+5V	DC +5V
33	CENTPE	Paper empty signal of centronics
34	*CENTFAL	Error signal of centronics
35	*CENTSTB	Strobe signal of centronics
36	*CENTINT	Initialize signal of centronics
37	CENTIO	Input/output signal of centronics
38	GND	Ground
39	+5V	DC +5V

40	GND	Ground
41	GND	Ground
42	+5V	DC +5V
43	GND	Ground
44	A15	Address A15
45	A13	Address A13
46	A11	Address A11
47	A9	Address A9
48	GND	Ground
49	A7	Address A7
50	A5	Address A5
51	A3	Address A3
52	A1	Address A1
53	GND	Ground
54	GND	Ground
55	D7	Data D7
56	D5	Data D5
57	GND	Ground
58	D3	Data D3
59	D1	Data D1
60	GND	Ground
61	GND	Ground
62	*ROMCS	External ROM chip select signal
63	PRISSEL	Select signal for printer
64	GND	Ground
65	GND	Ground
66	CENTD1	Data 1 of centronics
67	CENTD3	Data 3 of centronics
68	GND	Ground
69	CENTD5	Data 5 of centronics
70	CENTD7	Data 7 of centronics
71	GND	Ground
72	GND	Ground
73	CENTBSY	Busy signal of centronics
74	CENTSCT	Select signal of centronics
75	*CENTACK	Acknowledge pulse of centronics
76	*CENTATF	Auto-feed signal of centronics
77	*CENTNSI	SLCT IN signal of centronics
78	GND	Ground
79	+5V	DC +5V
80	GND	Ground

## KX-BP535/BP635/BP735 Series

### CN200 [SUB Board] PANEL Board

No.	Signal Name	Description
1	CNTUP	Count-up key input signal
2	D-COPY	2-screen print key input signal
3	COPY	Print key input signal
4	DENSITY	Density key input signal
5	FEED	Feed key input signal
6	+5V	DC +5V
7	*LED DEN	LED turn ON signal
8	GND	Ground
9	*REMOTE	Not used
10	*7SEGG	Segment-G turn ON signal
11	*7SEGA	Segment-A turn ON signal
12	*7SEGF	Segment-F turn ON signal
13	*7SEGB	Segment-B turn ON signal
14	*7SEGE	Segment-E turn ON signal
15	*7SEGC	Segment-C turn ON signal
16	*7SEGD	Segment-D turn ON signal

### CN300 [LAMP DRIVER Board] HOME SENSOR Board

No.	Signal Name	Description
1	+5V	DC +5V
2	SENST	Screen home sensor signal
3	GND	Ground
4	GND	Ground

### CN400 [AC Inlet] POWER Board

No.	Signal Name	Description
1	LIVE	AC 240V or 120V power source
2	NEUTRAL	Common line

### CN401 [SUB Board] POWER Board

No.	Signal Name	Description
1	+25V	DC +25V
2	+25V	DC +25V
3	GND	Ground
4	GND	Ground
5	*T/H ON	Thermal head power ON signal
6	N.C.	Not connected
7	5V	DC +5V
8	5V	DC +5V
9	GND	Ground
10	GND	Ground

### CN402 [Thermal head] POWER Board

No.	Signal Name	Description
1	+5V	DC +5V
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	+25V	DC +25V
6	+25V	DC +25V
7	+25V	DC +25V

### CN403 [MOTOR DRIVER Board] POWER Board

No.	Signal Name	Description
1	+25V	DC +25V
2	+25V	DC +25V
3	GND	Ground
4	GND	Ground

### CN500 [SUB Board] LAMP DRIVER Board

No.	Signal Name	Description
1	VRC	Stand by signal for KX-BP735
2	IO	Motor current set signal for KX-BP735
3	MTSHA	Screen motor drive signal
4	*LAMP ON	Lamp turn ON signal
5	*MTSHA	Screen motor drive signal
6	*PHEAT	Lamp preheat signal
7	+5V	DC +5V
8	+5V	DC +5V
9	MTSHB	Screen motor drive signal
10	SENST	Screen home sensor signal
11	*MTSHB	Screen motor drive signal
12	GND	Ground
13	GND	Ground
14	GND	Ground
15	+25V	DC +25V
16	+25V	DC +25V

### CN501 [Fluorescent lamp] LAMP DRIVER Board

No.	Signal Name	Description
1	HOT	Fluorescent lamp drive signal
2	HOT	Fluorescent lamp drive signal
3	N.C.	Not connected
4	COLD	Fluorescent lamp drive signal
5	COLD	Fluorescent lamp drive signal

**CN502 [HOME SENSOR Board] LAMP DRIVER Board**

No.	Signal Name	Description
1	+5V	DC +5V
2	SENST	Screen home sensor signal
3	GND	Ground

**CN503 [Screen motor] LAMP DRIVER Board**

No.	Signal Name	Description
1	SMA	Screen motor drive signal
2	SMB	Screen motor drive signal
3	*SMA	Screen motor drive signal
4	*SMB	Screen motor drive signal

**CN600 [Film end sensor] MOTOR DRIVER Board**

No.	Signal Name	Description
1	+5V	DC +5V
2	SENEND	Film end sensor signal
3	GND	Ground

**CN601 [Hopper sensor] MOTOR DRIVER Board**

No.	Signal Name	Description
1	GND	Ground
2	GND	Ground
3	GND	Ground
4	*SENHP	Hopper sensor signal
5	+5V	DC +5V

**CN602 [Paper sensor] MOTOR DRIVER Board**

No.	Signal Name	Description
1	+5V	DC +5V
2	SENPA	Paper sensor signal
3	GND	Ground
4	GND	Ground

**CN603 [Top sensor] MOTOR DRIVER Board**

No.	Signal Name	Description
1	GND	Ground
2	SENTOP	Top sensor signal
3	+5V	DC +5V

**CN604 [SUB Board] MOTOR DRIVER Board**

No.	Signal Name	Description
1	MTPFA	Paper feed motor drive signal
2	+5V	DC +5V
3	*MTPFA	Paper feed motor drive signal
4	+5V	DC +5V
5	MTPFB	Paper feed motor drive signal
6	GND	Ground

7	*MTPFB	Paper feed motor drive signal
8	*SENHP	Hopper sensor signal
9	MTPPA	Printer motor drive signal
10	SENPA	Paper sensor signal
11	*MTPPA	Printer motor drive signal
12	SENPD	Not used
13	MTPPB	Printer motor drive signal
14	SENTOP	Top sensor signal
15	*MTPPB	Printer motor drive signal
16	SENEND	Film end sensor signal

**CN605 [Printer motor] MOTOR DRIVER Board**

No.	Signal Name	Description
1	N.C.	Not connected
2	PMB	Printer motor drive signal
3	PMA	Printer motor drive signal
4	PMCOM2	Drive power supply
5	PMCOM1	Drive power supply
6	*PMB	Printer motor drive signal
7	*PMA	Printer motor drive signal

**CN606 [Feed motor] MOTOR DRIVER Board**

No.	Signal Name	Description
1	FMB	Paper feed motor drive signal
2	FMA	Paper feed motor drive signal
3	FMCOM2	Drive power supply
4	FMCOM1	Drive power supply
5	*FMB	Paper feed motor drive signal
6	*FMA	Paper feed motor drive signal

**CN607 [Paper sensor] MOTOR DRIVER Board**

No.	Signal Name	Description
1	GND	Ground
2	GND	Ground
3	+25V	DC +25V
4	+25V	DC +25V

**CN700 [SUB Board] MAIN Board**

No.	Signal Name	Description
1	GND	Ground
2	CCD	CCD sensor signal
3	GND	Ground
4	CLK2	CCD clock
5	SDE	Serial data enable signal
6	CLK1	CCD clock
7	CCDTG	CCD reset clock
8	AVDD	Analog DC+5V

## KX-BP535/BP635/BP735 Series

### CN800 [MOTOR DRIVER Board] TOP SENSOR Board

No.	Signal Name	Description
1	+5V	DC +5V
2	+5V	DC +5V
3	SENTOP	Top sensor signal
4	GND	Ground
5	GND	Ground

### CN820 [MOTOR DRIVER Board] HOPPER SENSOR Board

No.	Signal Name	Description
1	GND	Ground
2	GND	Ground
3	GND	Ground
4	*SENHP	Hopper sensor signal
5	+5V	DC +5V

### CN840 [SUB Board] DOOR SENSOR Board

No.	Signal Name	Description
1	+5V	DC +5V
2	*SENDOOR	Printer door sensor signal
3	GND	Ground

### CN860 [DATA DRIVER Board] FILM END SENSOR Board

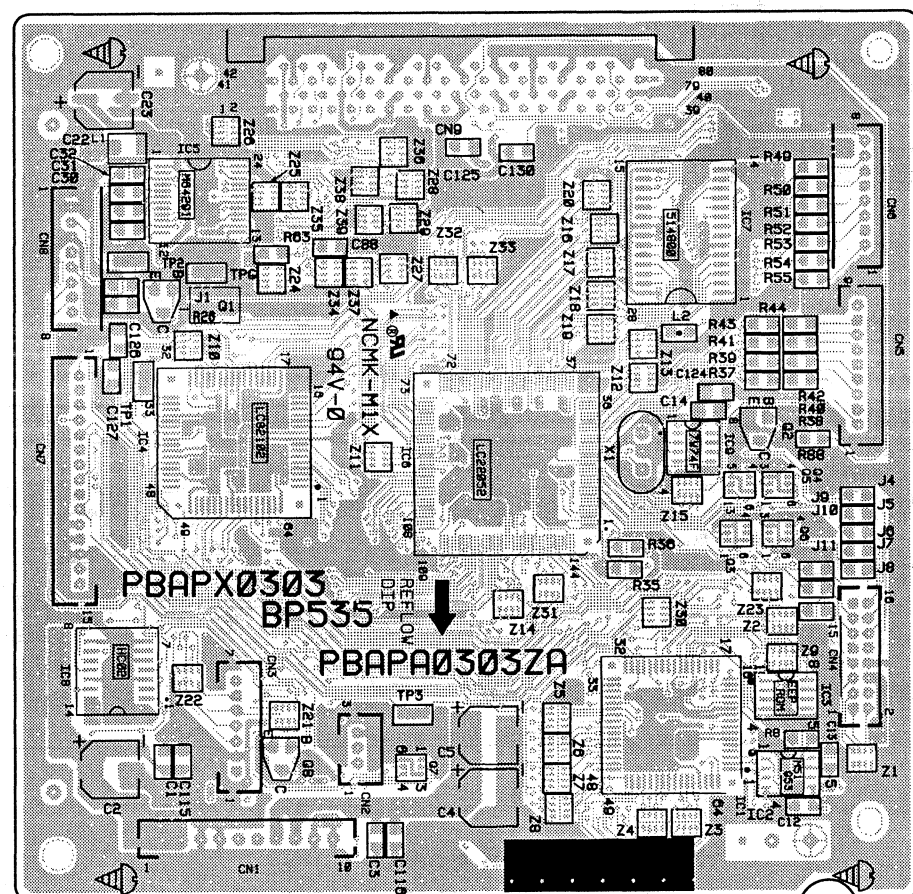
No.	Signal Name	Description
1	+5V	DC +5V
2	SENEND	Film end sensor signal
3	GND	Ground

### CN880 [SUB Board] PAPER SENSOR Board

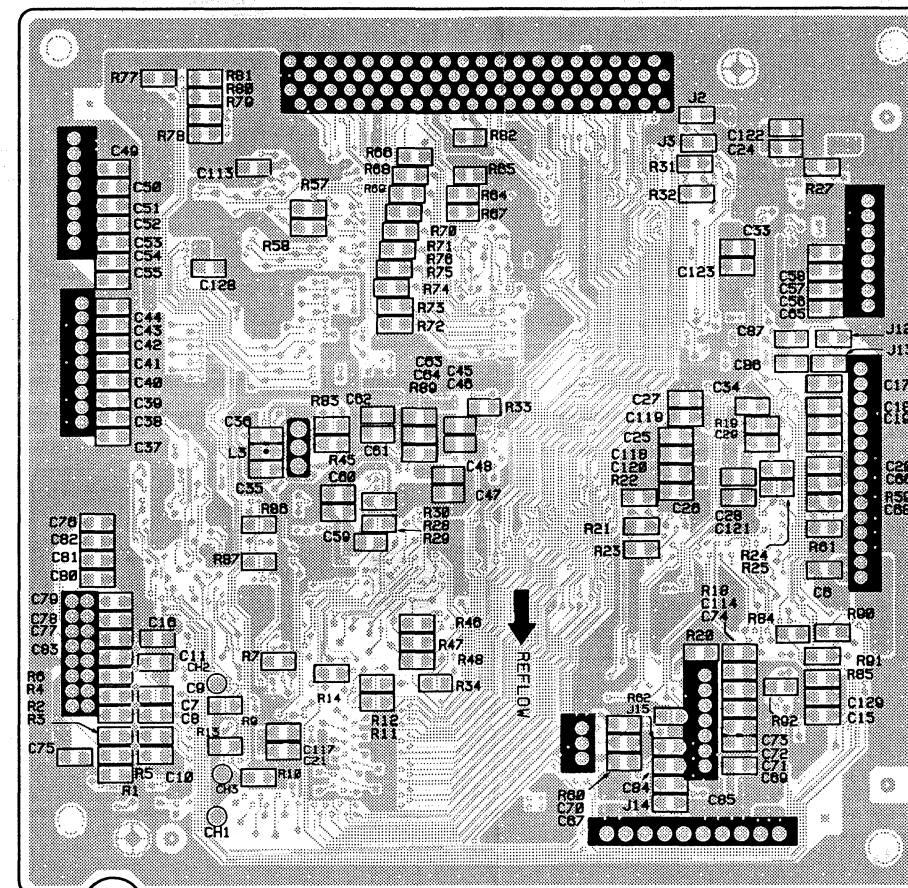
No.	Signal Name	Description
1	+5V	DC +5V
2	SENPA	Paper sensor signal
3	GND	Ground
4	N.C.	Not connected

## SECTION 11 CIRCUIT BOARDS

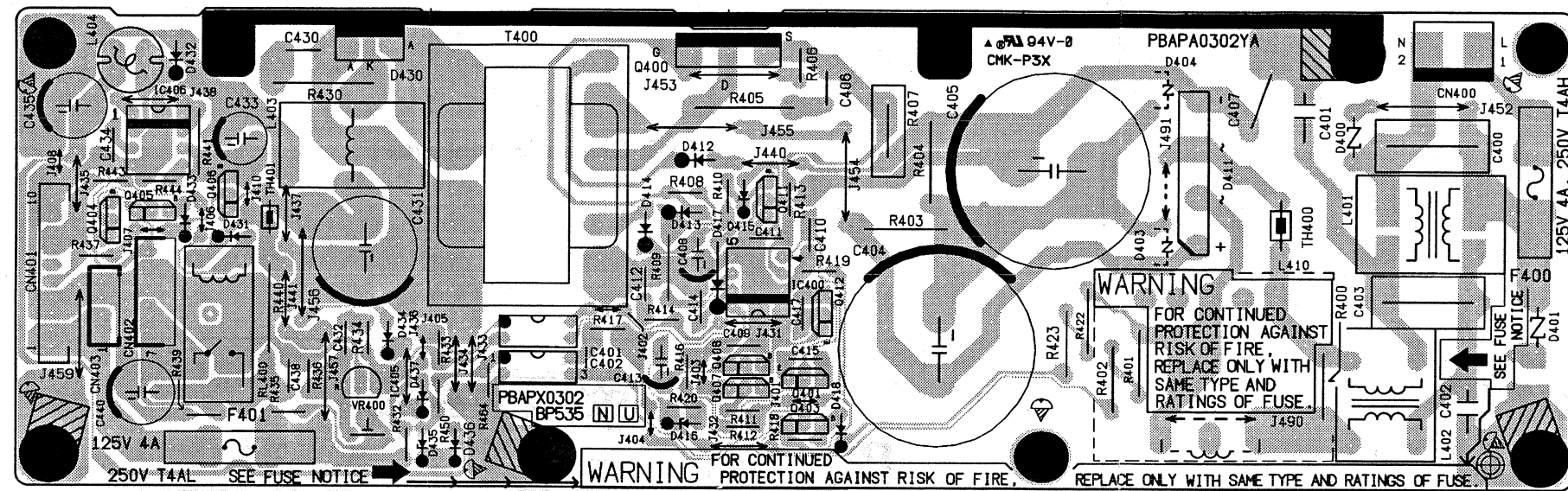
SUB Board (Component side)



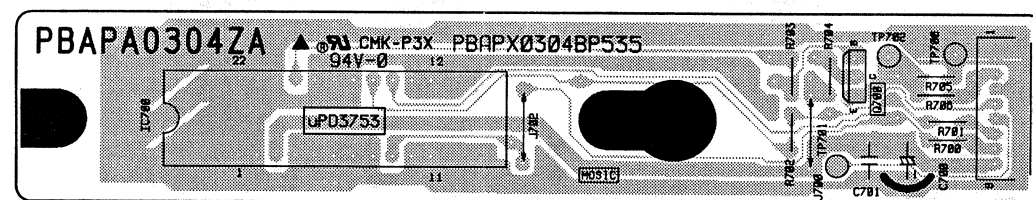
SUB Board (Solder side)



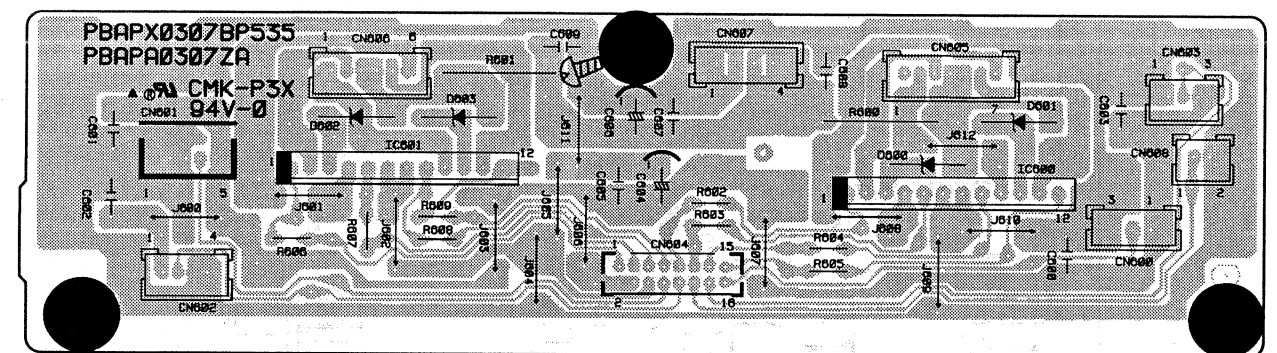
## POWER Board



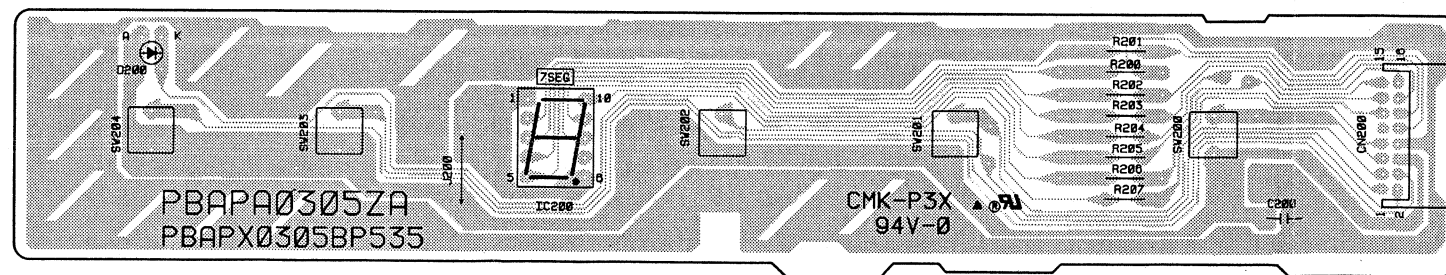
## MAIN Board



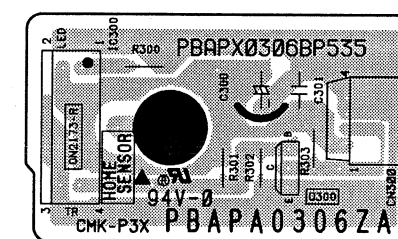
## MOTOR DRIVER Board



## PANEL Board



## HOME SENSOR Board







SECTION 12  
SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE

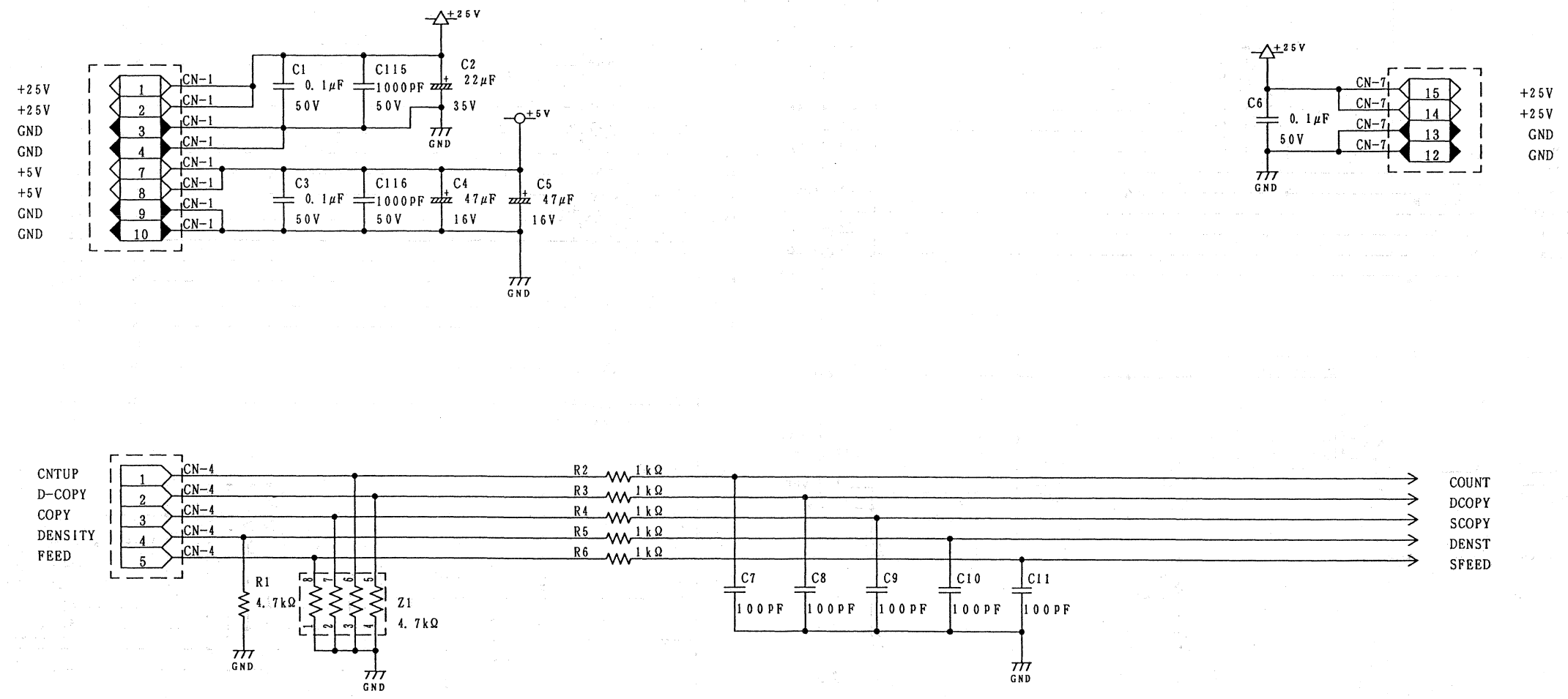
THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THIS SCHEMATIC.

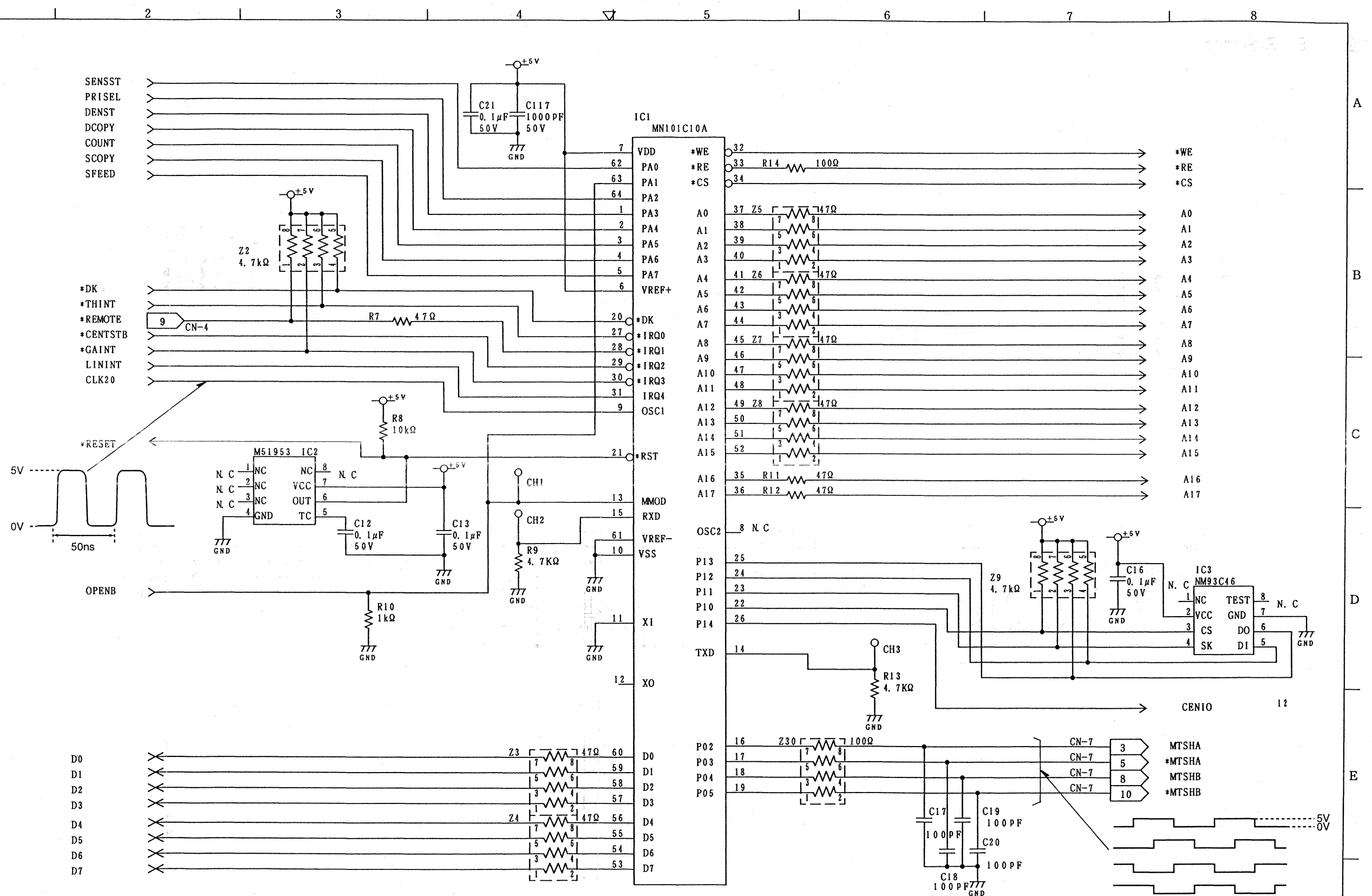
12.1	SUB Board .....	1	to	8
12.2	LAMP DRIVER Board .....	9		
12.3	MAIN Board .....	10		
12.4	PANEL Board .....	11		
12.5	MOTOR DRIVER Board .....	12	to	13
12.6	HOPPER SENSOR Board .....	14		
12.7	DOOR SENSOR Board .....	15		
12.8	FILM END SENSOR Board .....	16		
12.9	PAPER SENSOR Board .....	17		
12.10	HOME SENSOR Board .....	18		
12.11	TOP SENSOR Board .....	19		
12.12	POWER Board .....	20	to	21

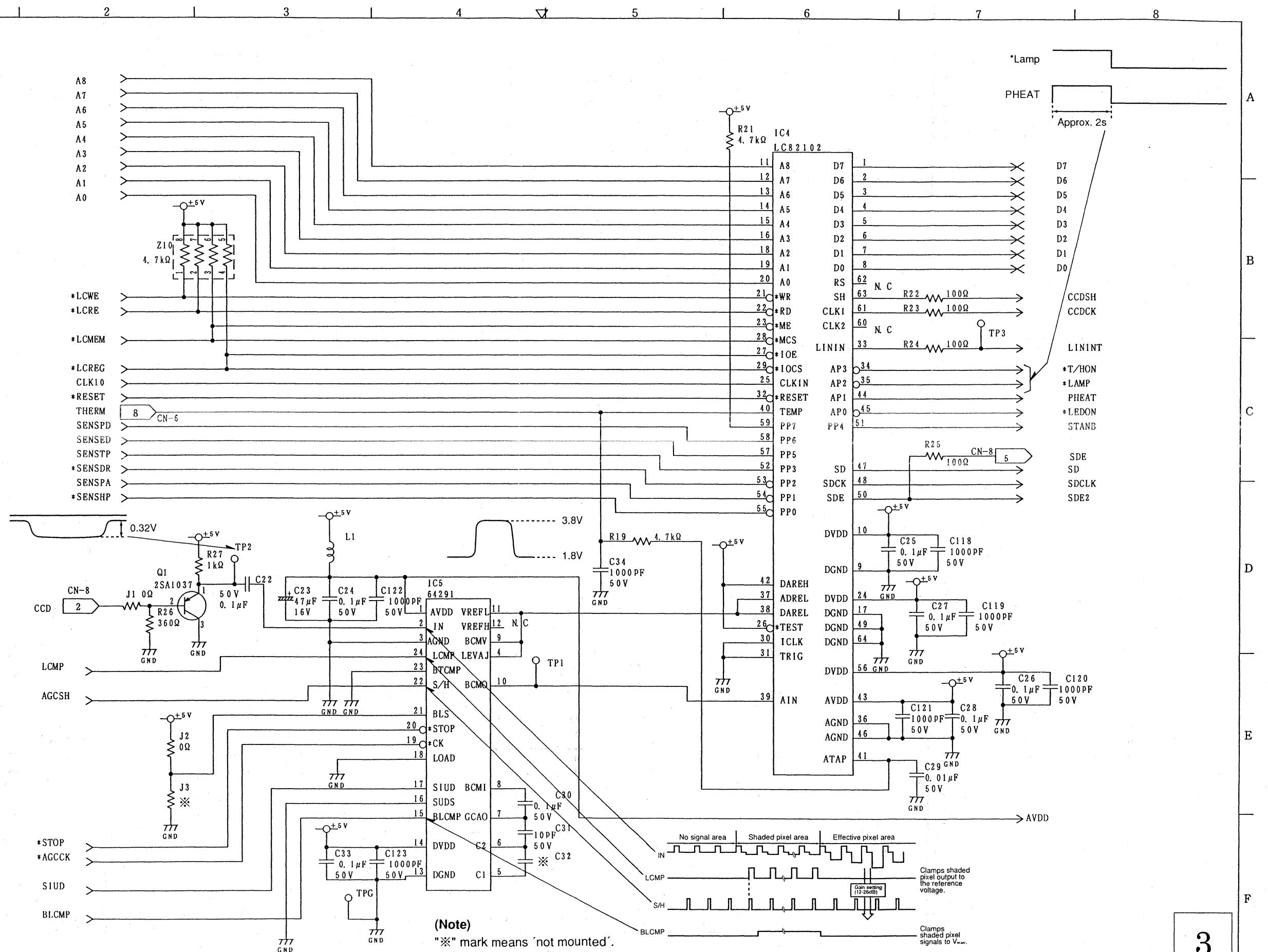
**Note:** This Schematic Diagram is the latest at the time of printing and subject to change without notice.



12.1 SUB Board

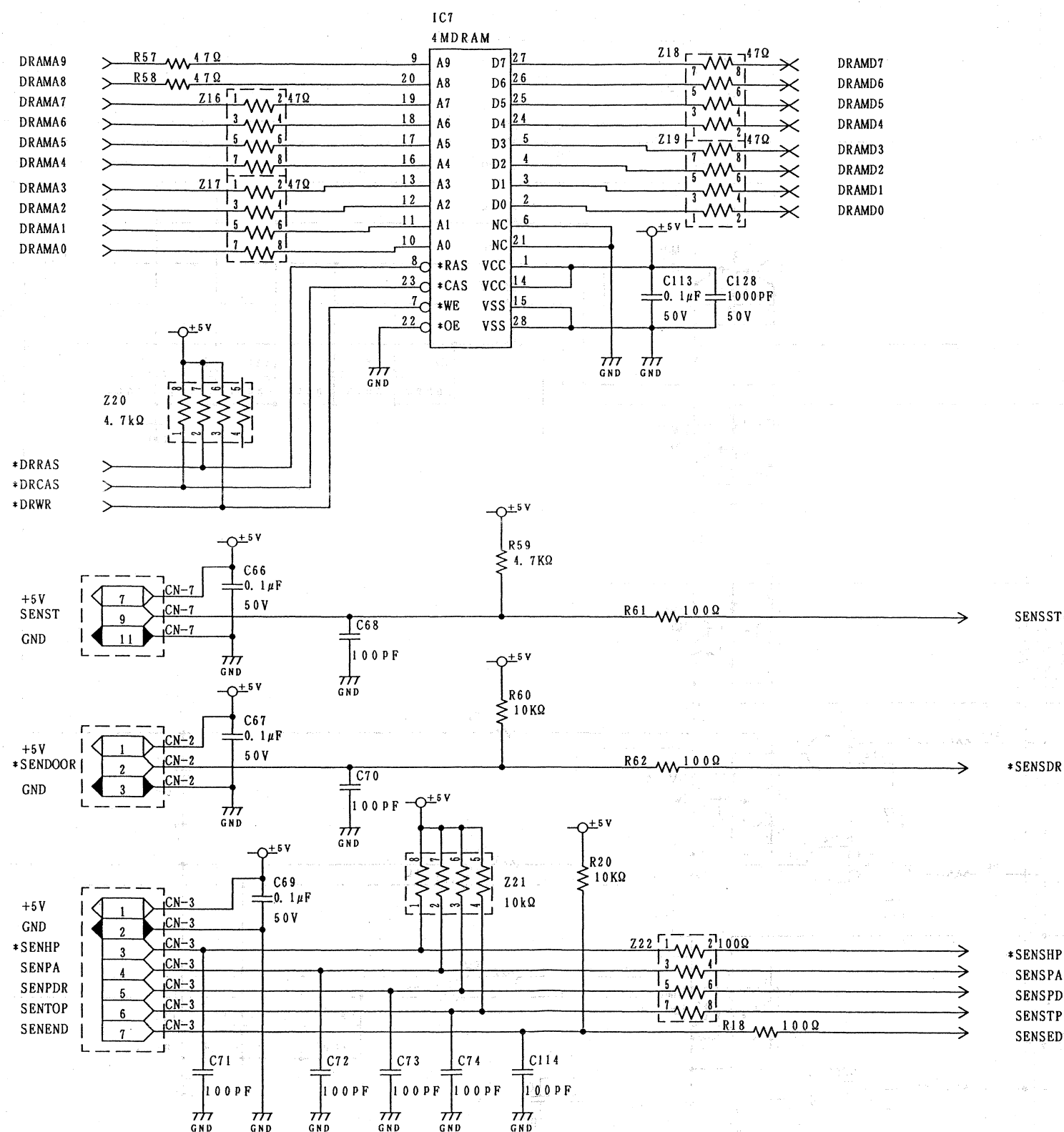






## KX-BP535/BP635/BP735 Series





A

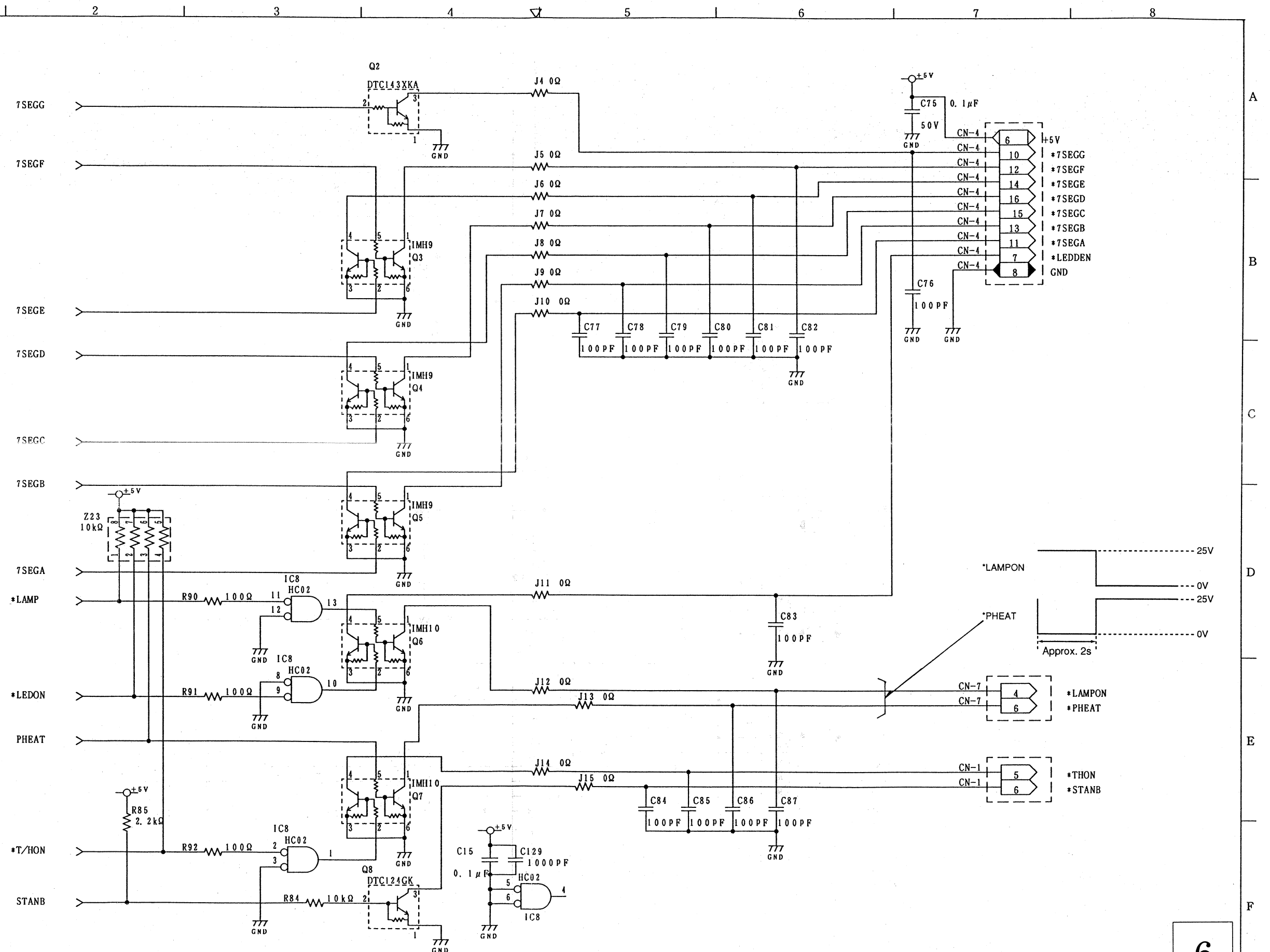
B

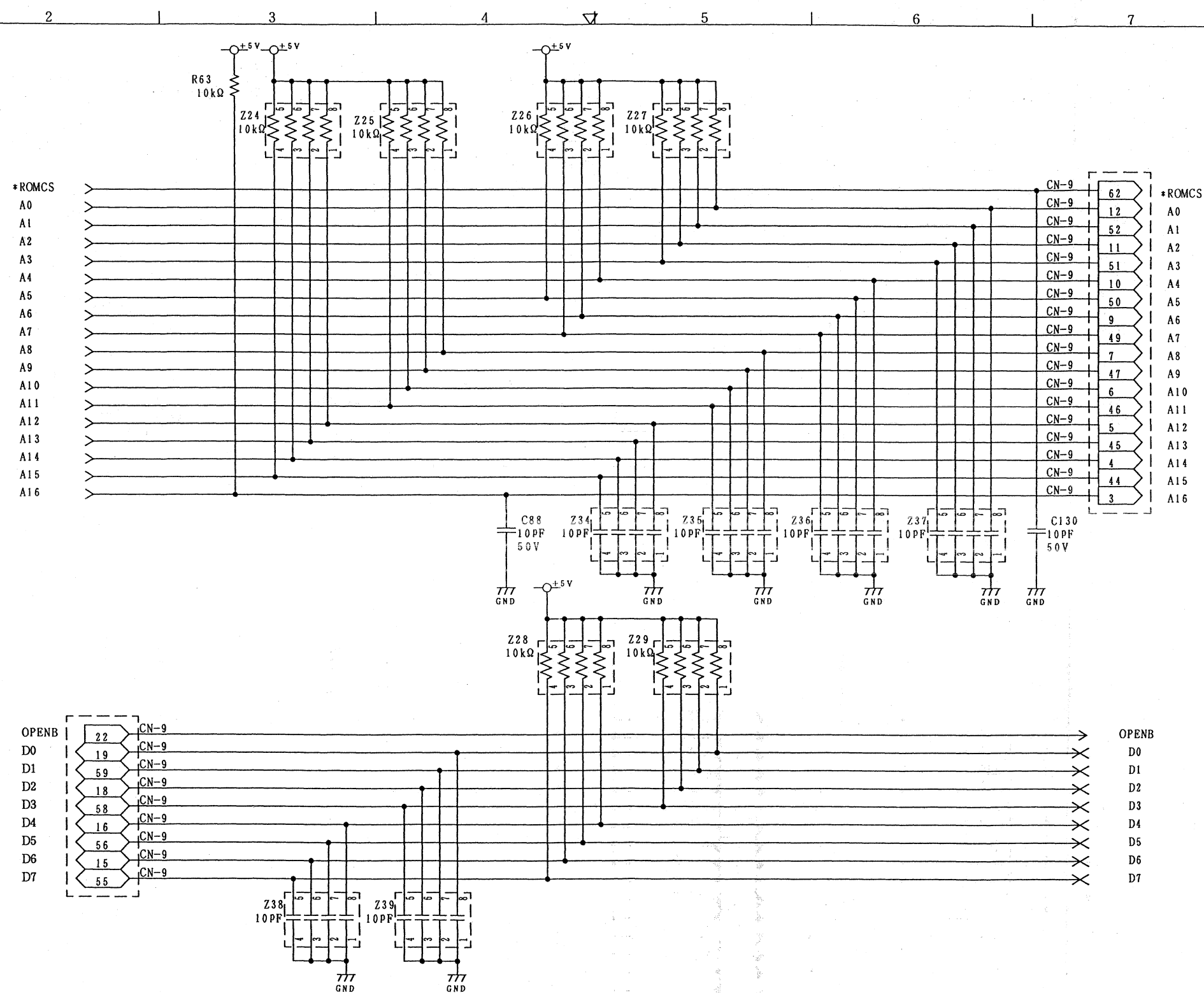
C

D

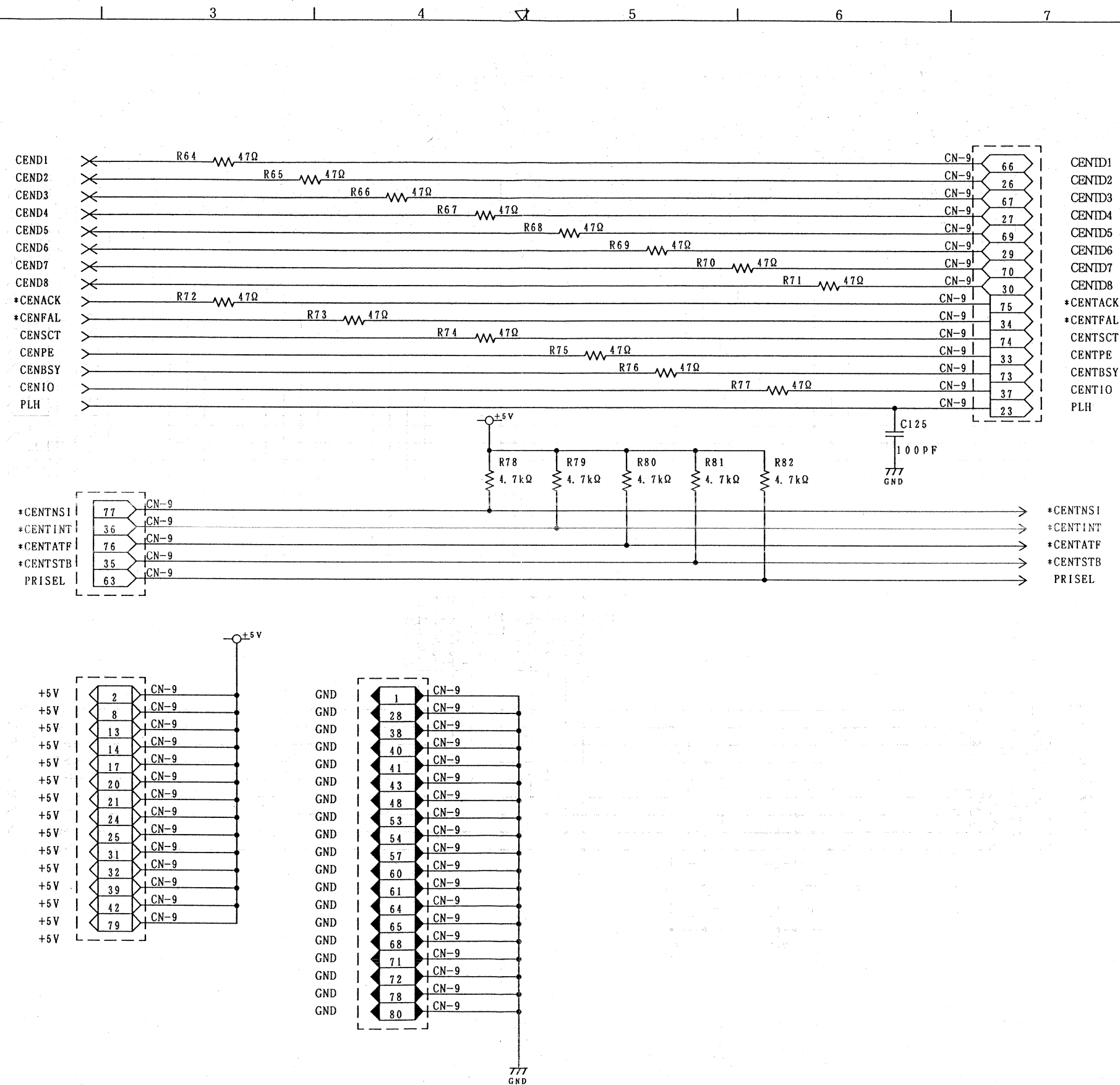
E

F



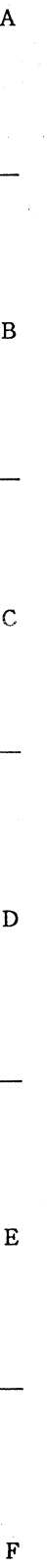


KX-BP535/BP635/BP735 Series KX-BP535/BP635/BP735 Series

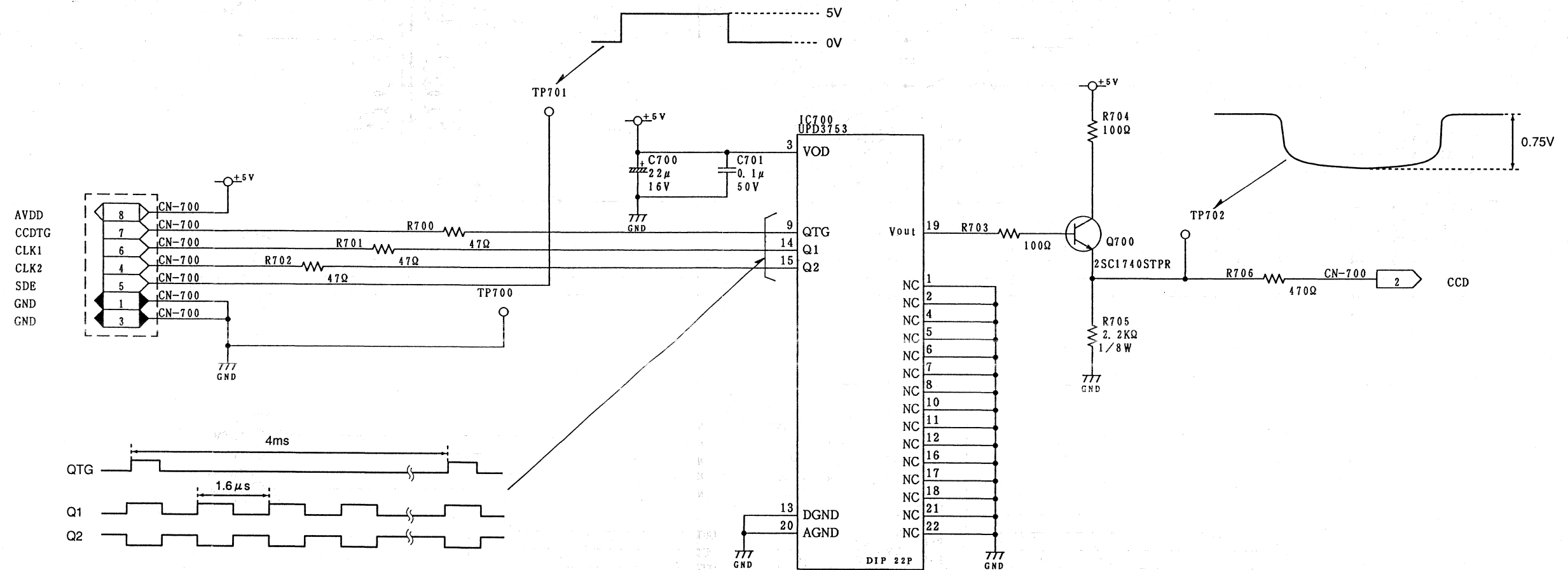




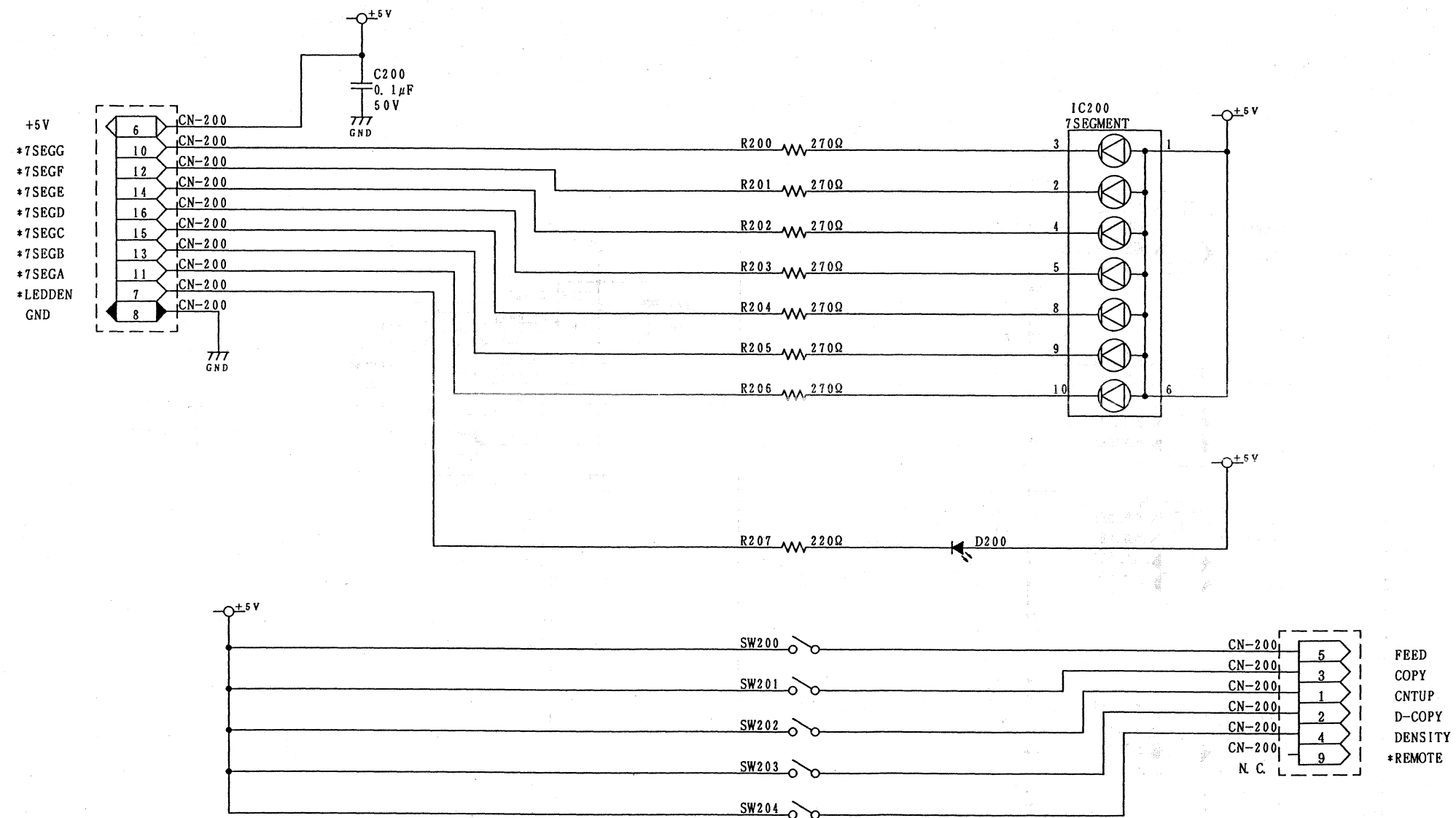
DECEMBER 1997



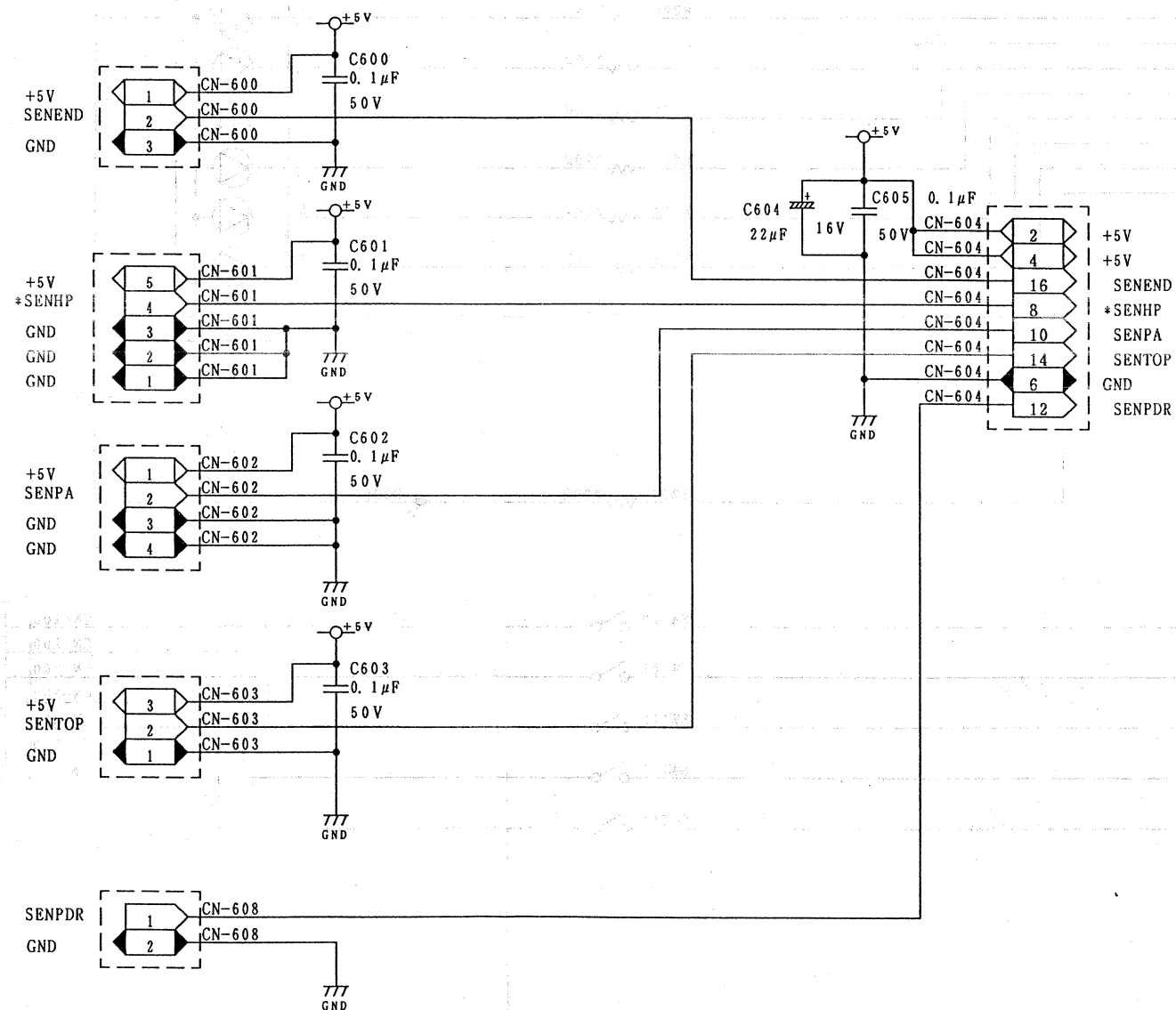
# 12.3 MAIN Board

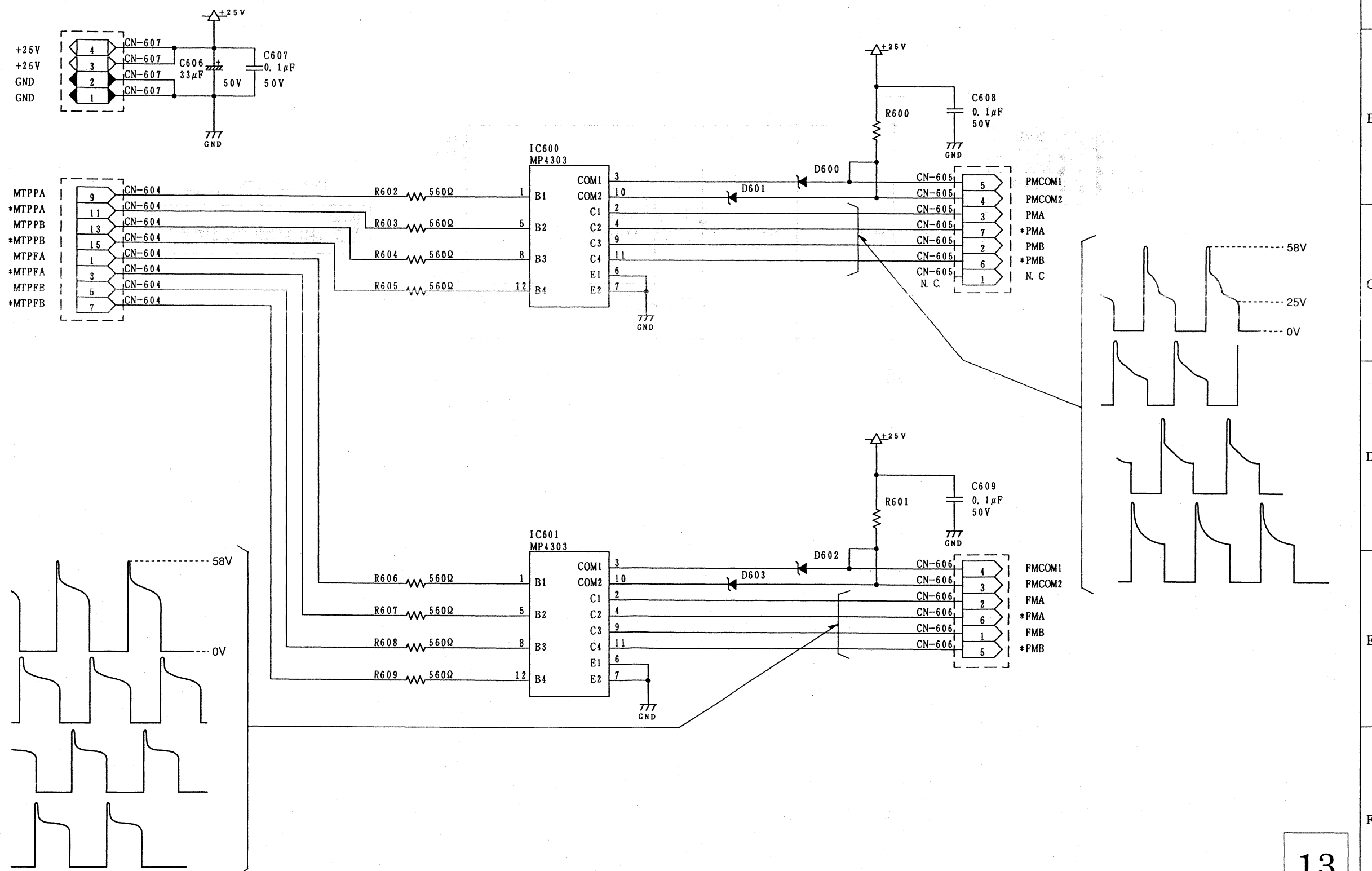


## 12.4 PANEL Board

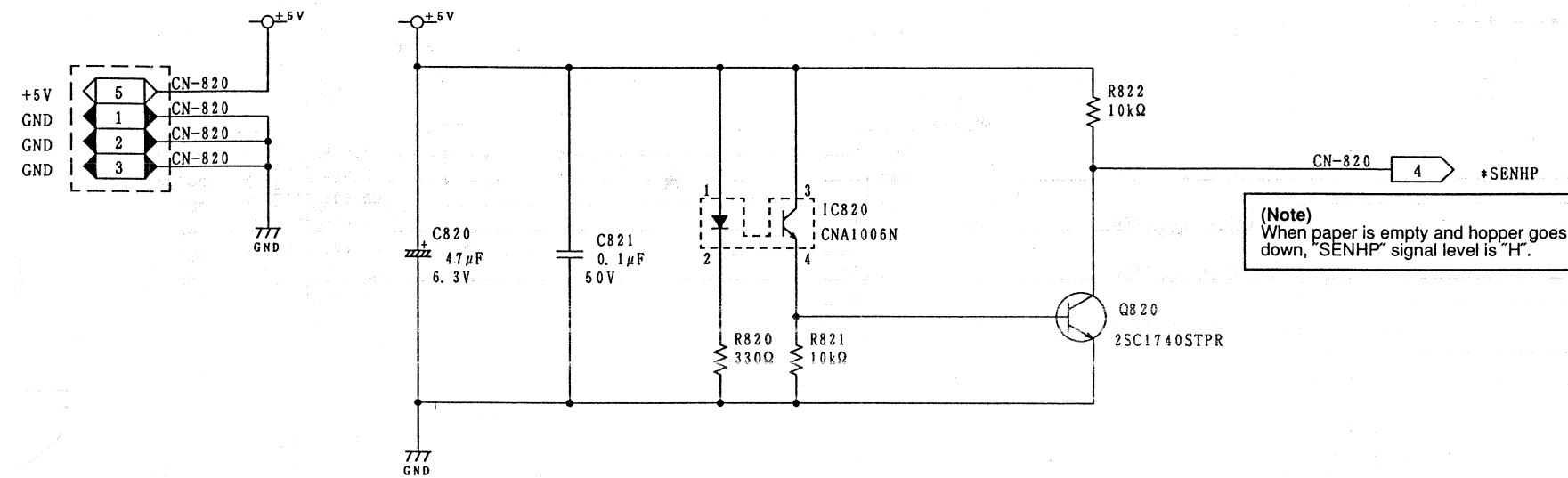


## 12.5 MOTOR DRIVER Board

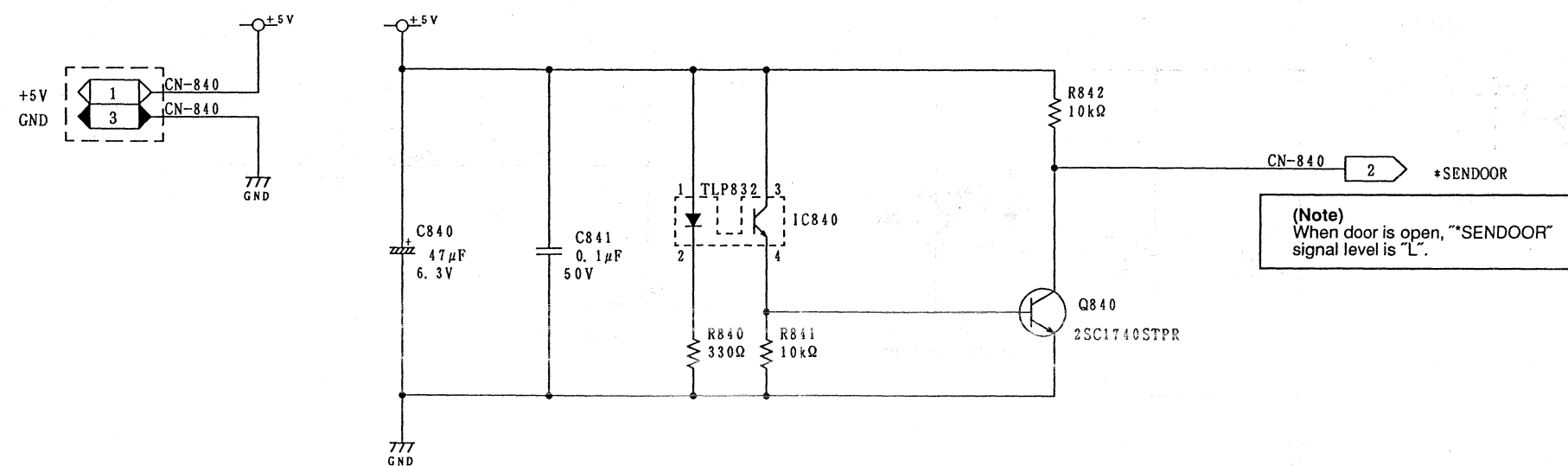




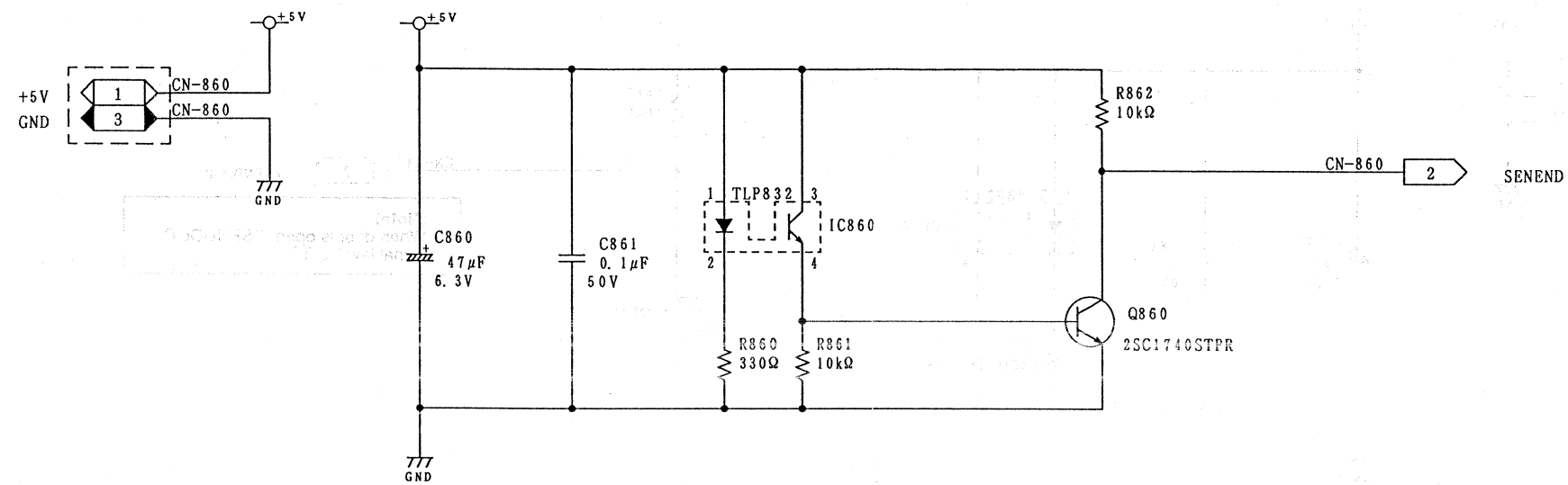
## 12.6 HOPPER SENSOR Board



## 12.7 DOOR SENSOR Board

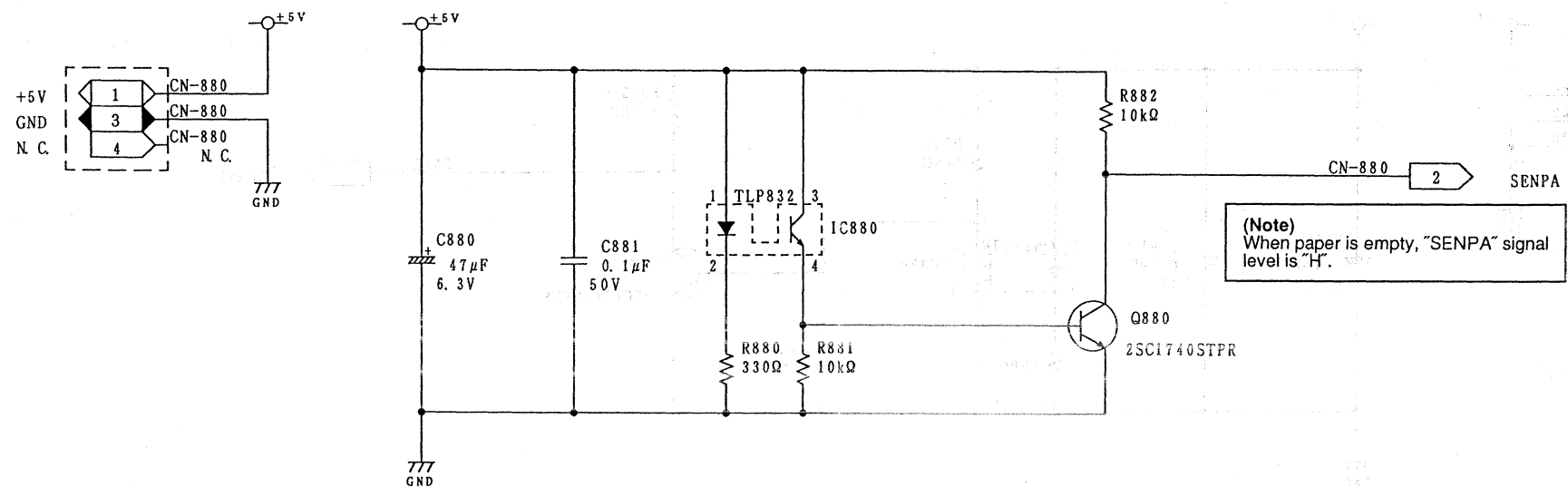


## 12.8 FILM END SENSOR Board

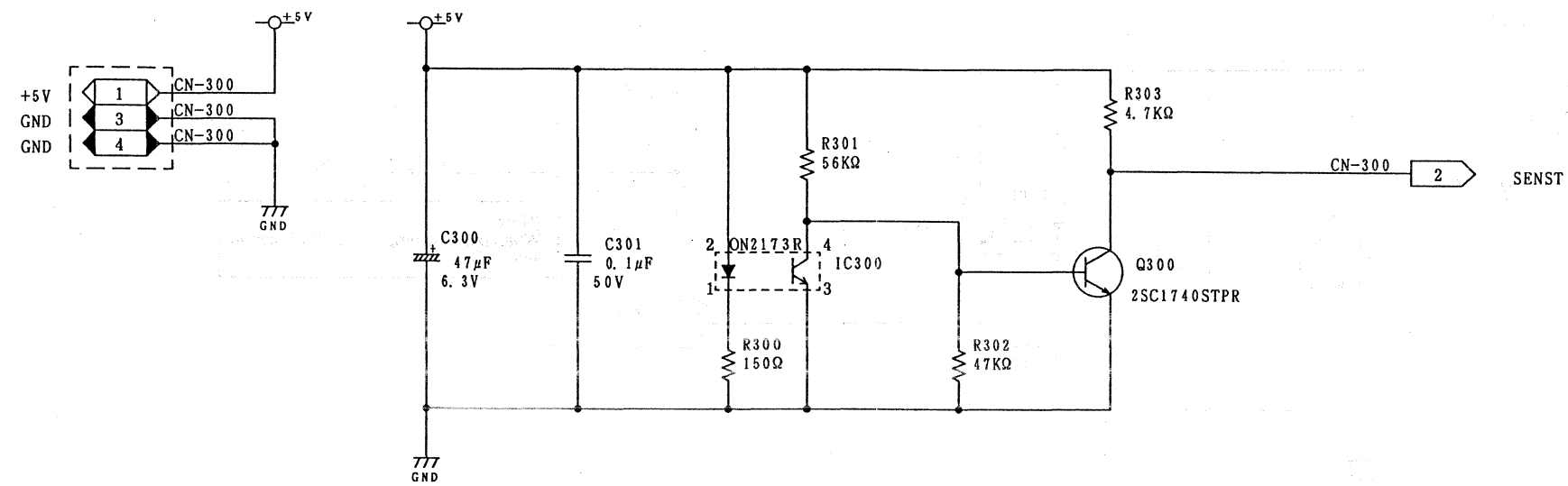




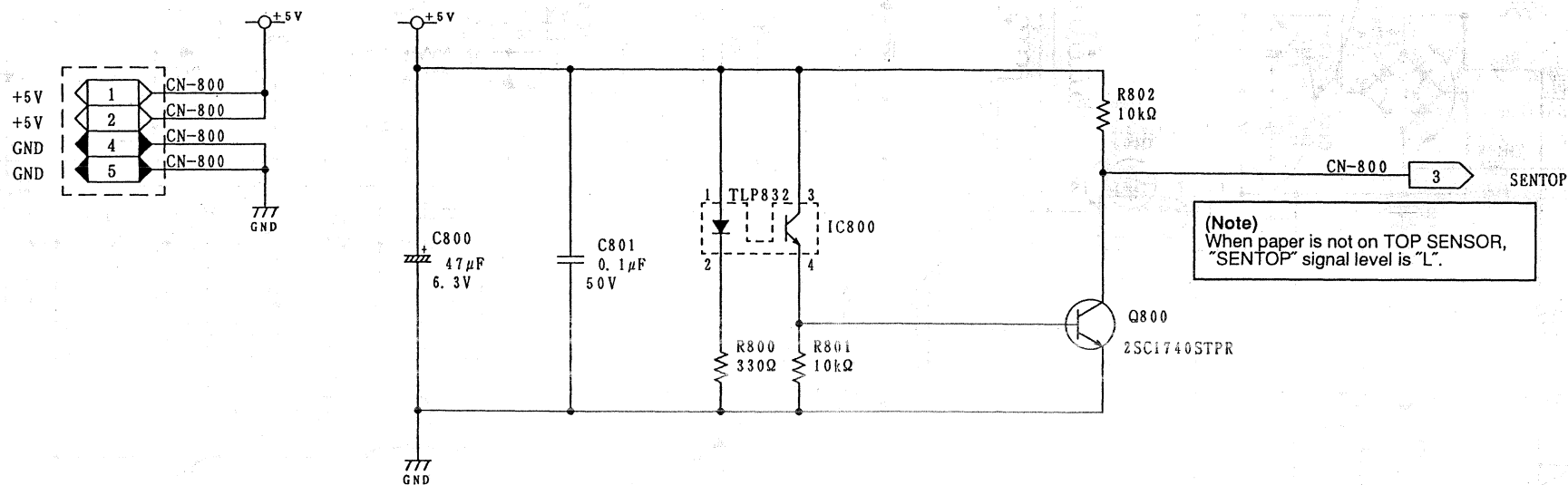
# 12.9 PAPER SENSOR Board



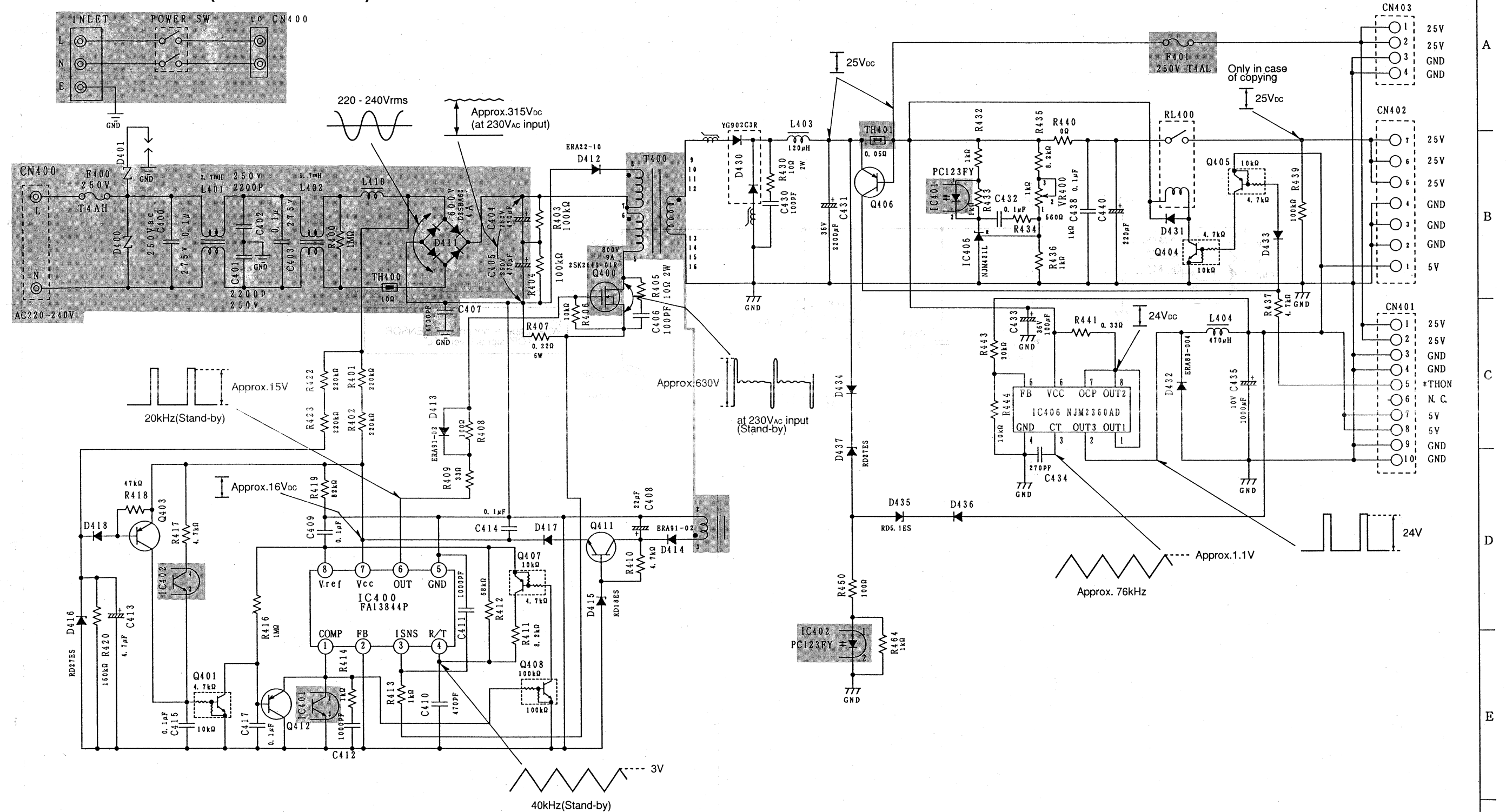
## 12.10 HOME SENSOR Board



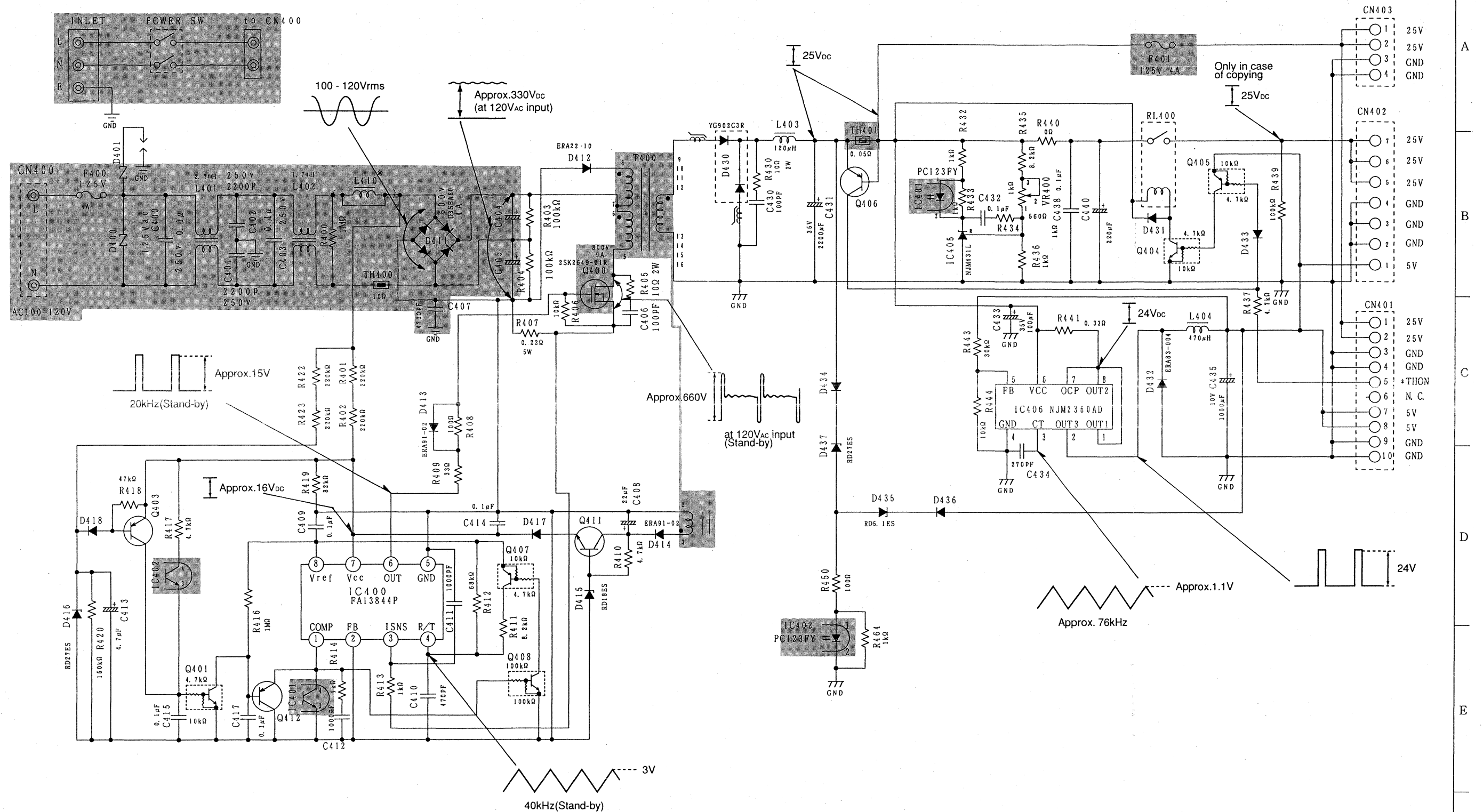
# 12.11 TOP SENSOR Board



## 12.12 POWER Board (For 220V - 240V)

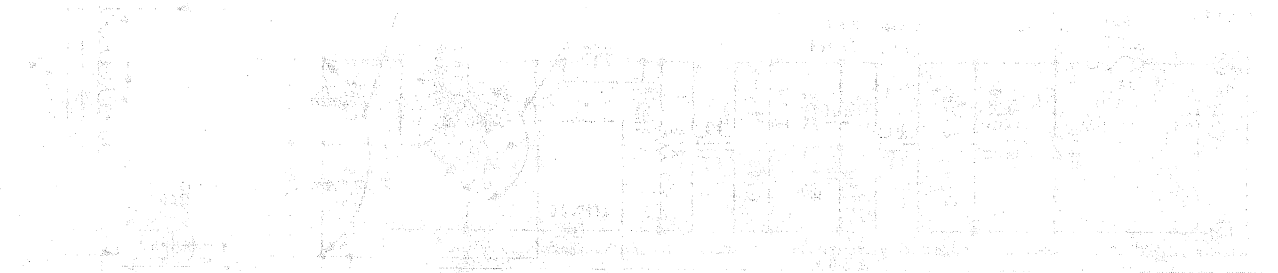


# 12.13 POWER Board (For 100V - 120V)




(Note)  
 "\*" mark means 'not mounted'.

2010.10.10 2010.10.10 2010.10.10



SECTION 13  
PARTS LOCATION AND MECHANICAL PARTS LIST

Important Safety Notice

Components identified by  mark in the Remark column have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

13.1 Screen ..... 13 – 2

13.2 Optical Unit ..... 13 – 6

13.3 Printer ..... 13 – 10

13.4 Packing Parts ..... 13 – 12

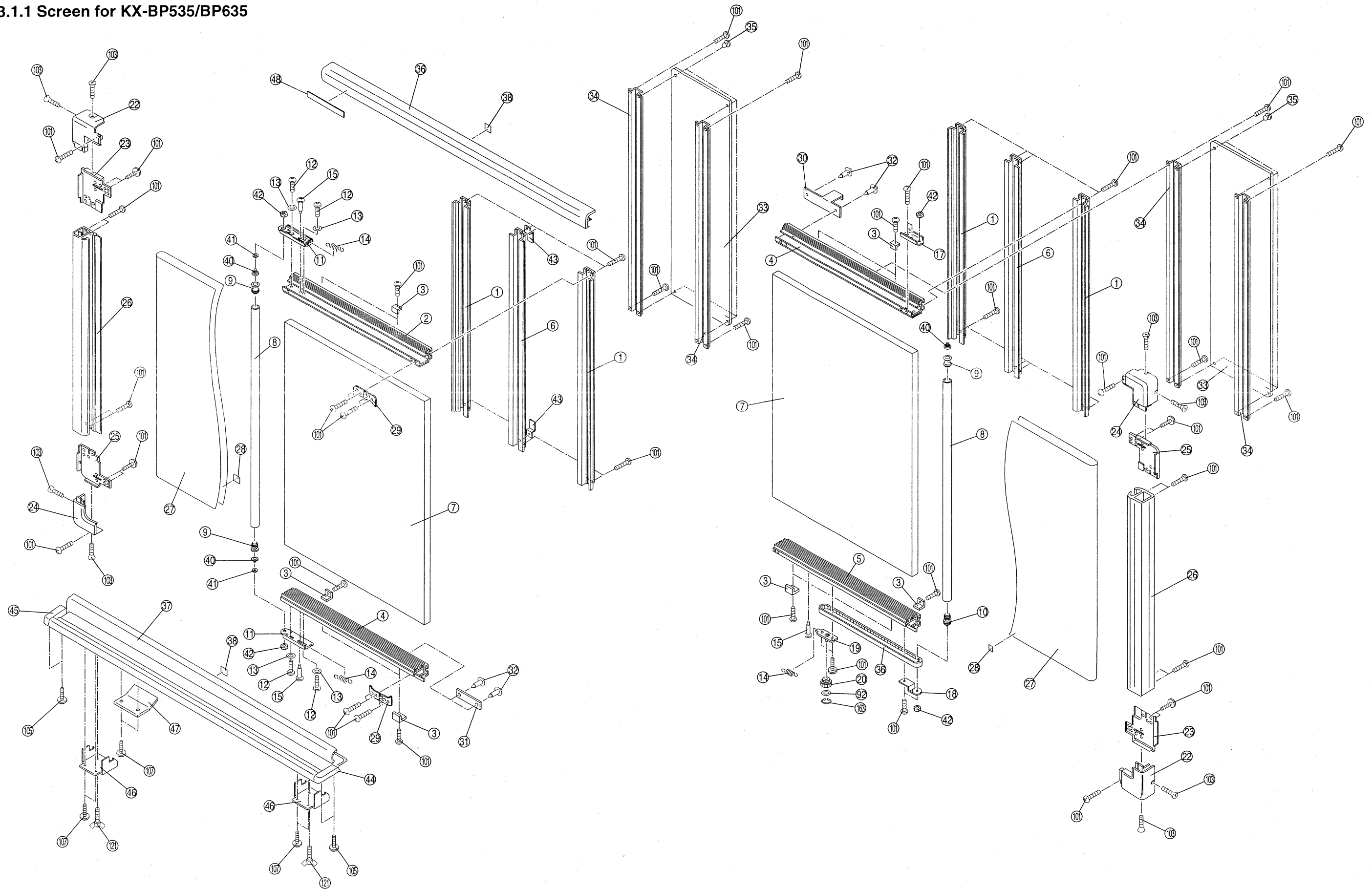
**Note: RTL (Retention Time Limited)**

The marking (RTL) in the Remark column indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention.

After the end of this period, the assembly will no longer be available.

## 13.1 Screen

### 13.1.1 Screen for KX-BP535/BP635

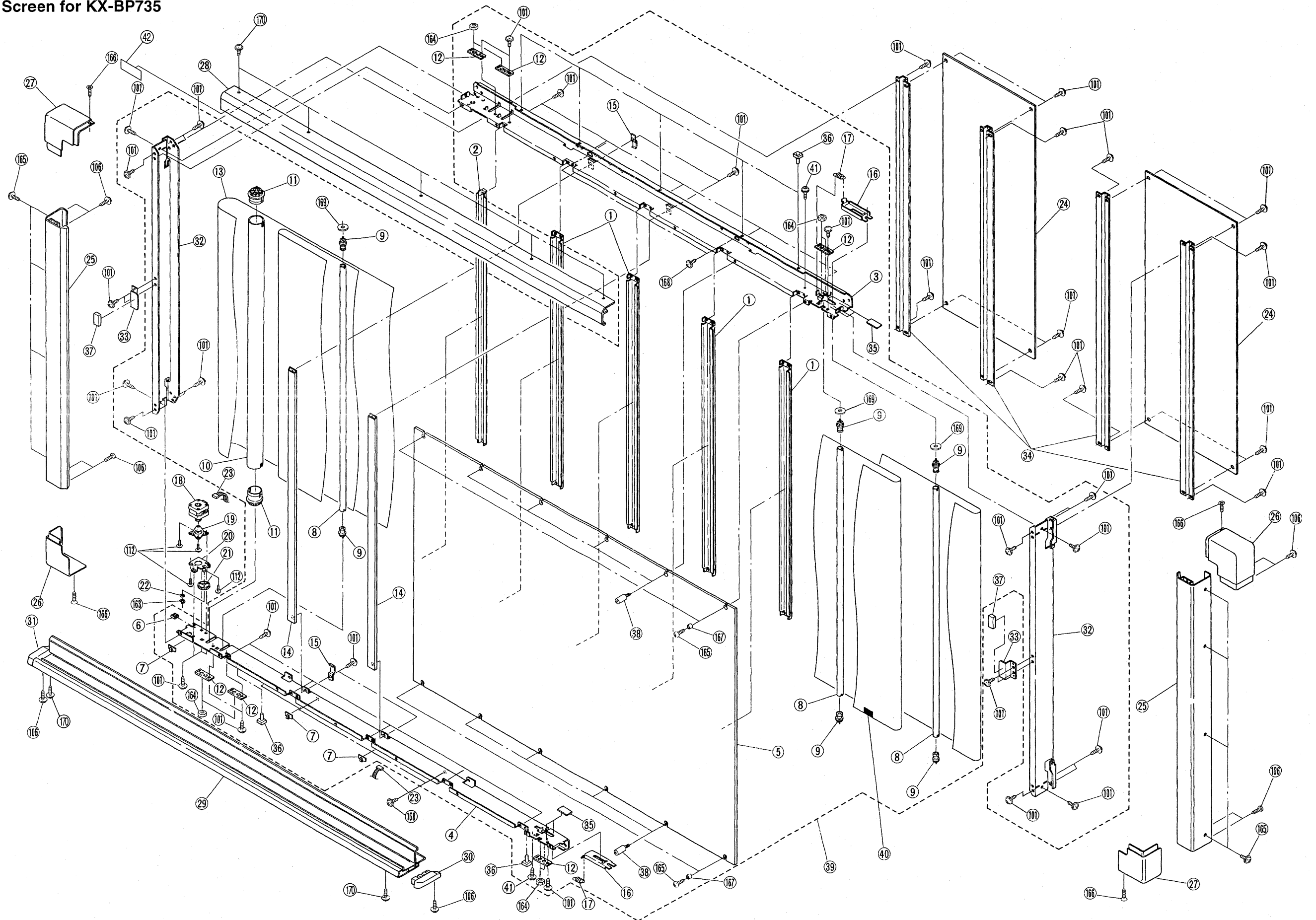




REPLACEMENT MECHANICAL PARTS LIST (Screen for KX-BP535/BP635)

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBUCA0021Y-J	Panel Frame (vertical) (assembly)		4	
2	PBUAA0106Z	Panel Frame (left-upper) for KX-BP535		1	
2	PBUAA0109Z	Panel Frame (left-upper) for KX-BP635		1	
3	PBMDA0448Z	Fixing Plate		10	
4	PBUAA0107Z	Panel Frame (left-lower) for KX-BP535		2	
4	PBUAA0110Z	Panel Frame (left-lower) for KX-BP635		2	
5	PBUAA0108Z	Panel Frame (right-upper) for KX-BP535		1	
5	PBUAA0111Z	Panel Frame (right-upper) for KX-BP635		1	
6	PBUCA0022Z	Panel Frame (right-lower) for KX-BP535		2	
6	PBUCA0022Z	Panel Frame (right-lower) for KX-BP635		4	
7	PBUE3X	Inner Panel for KX-BP535	PS	2	
7	PBUEA0051Z	Inner Panel for KX-BP635	PS	2	
8	PBDR1Z52	Roller		2	
9	PBUDA0033Z	Roller Gear	POM	3	
10	PBUDA0023Z	Roller Shaft with Pulley		1	
11	PBMD47Z40	Roller Sliding Plate		1	
12	PBHDA0002Z	Screw for Roller Attachment		4	
13	PBHEA0006Z	Spacer		4	
14	PBDS10Z40	Tension Spring		3	
15	PBHDA0001Z	Shoulder Screw		3	
17	PBMDA0001Z52	Drive Roller Attachment		1	
18	PBMDA0173Z	Roller Adjust Plate		1	
19	PBMDX174B530	Pulley Gear Bracket (complete)		1	
20	PBUDA0024Z	Pulley Gear	POM	1	
21	PBDVA0002Z	Belt for KX-BP535		1	
21	PBDVA0004Z	Belt for KX-BP635		1	
22	PBGCA0007Z	Corner Escutcheon A	PS	2	△
23	PBUAA0051Z	Corner Escutcheon Attachment A		2	
24	PBGCA0008Z	Corner Escutcheon B	PS	2	△
25	PBUAA0052Z	Corner Escutcheon Attachment B		2	
26	PBGCA0006Z	Escutcheon (vertical)	PVC	2	△
27	PBUE2Z-J	Screen (Film) with Home Marker for KX-BP535	(PET)	1	△
27	PBUEA32Z-J	Screen (Film) with Home Marker for KX-BP635	(PET)	1	△
28	PBBSA0043Z	Home Marker (Black Patch)		2	
29	PBBHA0001Z	Hinge		2	
30	PBHMA0048Z	Panel Side Plate (upper)		1	
31	PBHMA0049Z	Panel Side Plate (lower)		1	
32	NF-2F19	Rivet		4	
33	PBKUA0002X-J	Rear Cover for KX-BP535	PP or PVC	2	△
33	PBKUA0003X-J	Rear Cover for KX-BP635	PP or PVC	2	△
34	PBHMA0051Y	Rear Plate		4	
35	NRP-504	Nylon Rivet		8	
36	PBGCA0004Z	Escutcheon (upper) for KX-BP535	PVC	1	△
36	PBGCA0011Z	Escutcheon (upper) for KX-BP635	PVC	1	△
37	PBGCA0005Y	Escutcheon (lower) for KX-BP535	PVC	1	△
37	PBGCA0012Y	Escutcheon (lower) for KX-BP635	PVC	1	△
38	PBHGA0020Z	Rubber		2	
40	DR-22-B3	Bearing		3	
41	XWG6	Washer		2	
42	XNG6EFX	Nut		4	
43	PBHRA0106Z	Panel Frame Holder	POM	2	
44	PBKEA0039Z	Side Cover (right)	PS	1	△
45	PBKEA0040Z	Side Cover (left)	PS	1	△
46	PBHMA0075Y	Plate		2	
47	PBHMA0179Z	Plate		1	
48	PBQAA0590Z	Label for KX-BP535A/C/G/T/U/KX-BP635A/C/G/T/U		1	
92	RWPS6-025	Spacer		1	
101	XTB4+8FFY	Screw for KX-BP535		67	
101	XTB4+8FFY	Screw for KX-BP635		75	
103	XTS3+8FFY	Screw (flat head)		8	
105	XTW3+10PFX	Screw		4	
107	XTW3+8LFX	Screw		6	
121	XVP4F30FX	Thumb Screw		2	
163	XUC5FY	E-ring		1	

13.1.2 Screen for KX-BP735

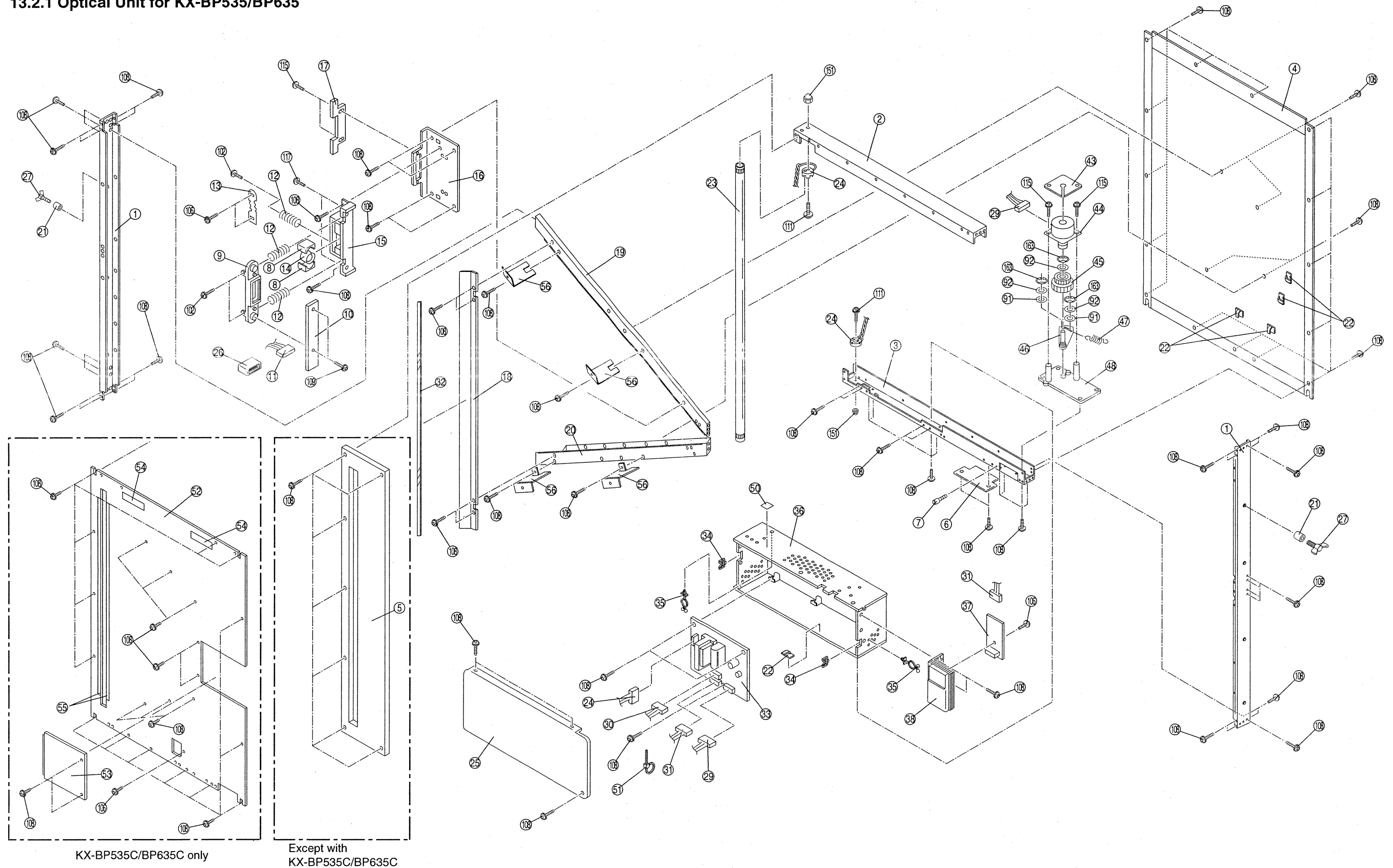


REPLACEMENT MECHANICAL PARTS LIST (Screen for KX-BP735)

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBUCA0022Z	Screen Tension Frame	PP	4	
2	PBMCA0051Z	Panel Frame (Vertical)		1	
3	PBUAA0091Y	Panel Frame (Upper)		1	
4	PBUAA0092Y	Panel Frame (Lower)		1	
5	PBUEA0062Z	Inner Panel		1	
6	EDS-1208U	Harness Clamper		1	
7	K-104G	Harness Hook		4	
8	PBDR1Z52	Roller		3	
9	PBUD1Y52	Roller Shaft with Gear		6	
10	PBDRA0045Y	Main Roller		1	
11	PBUDA0029Z	Main Roller Shaft	(PET)	2	△
12	PBMDA0253Z	Roller Fastening Plate		6	
13	PBUEA0061Z-J	Screen		1	
14	PBMCA0050Z	Optical Frame		2	
15	PBHRA0106Z	Frame Attachment	POM	2	△
16	PBMDA0254Z	Roller Side Plate	POM	2	
17	PBDSA0060Y	Roller Side Spring		2	
18	PBAMA0011Z	Screen Motor	POM	1	
19	RF1401-A5	Damper		1	
20	PBMDX0255Z	Screen Motor Attachment		1	
21	PBDGA0032Z	Gear		1	
22	RWPS6-025	Spacer	PP or PVC	1	
23	PBJEA0329Z	Screen Motor Harness		1	
24	PBKUA0006Z	Rear Cover	PVC	2	△
25	PBGCA0015Z	Frame Cover RL	PS	2	
26	PBGCA0016Z	Coner Frame A	PS	2	
27	PBGCA0017Z	Coner Frame B	PS	2	
28	PBGCA0013Z	Upper Frame Cover	PVC	1	
29	PBGCA0014Z	Lower Frame Cover	PVC	1	
30	PBKEA0052Z	Side Protector R	PS	1	
31	PBKEA0053Z	Side Protector L	PS	1	
32	PBUAA0093Z	Panel Side Frame		2	
33	PBHMA0073Z	Gear Cover Plate		2	
34	PBHMA0051Z	Rear Cover Attachment		4	
35	PBHRA0104Z	Slide Sheet		4	
36	ES-3K	Screw Bush		7	
37	PBHRA0108Z	Spacer Rubber		2	
38	PBHDA0004Z	Screw Pin		8	
39	PBKMX01B730	Screen Assembly		1	
40	PBHSA0043Z	Home Mark (Black Patch)		4	
41	PBMDA0001Z	Screw		2	
42	PBQAA0590Z	Label for KX-BP735A/C/G/T/U		1	
101	XTB4+8FFY	Screw		49	
106	XTW3+10PFY	Screw		10	
112	XYN3+J6FX	Screw with Washer		4	
163	XUC5FY	E-ring		1	
164	XNG6EFX	Nut		8	
165	XTT4+10FFY	Screw		12	
166	XTS3+8FFY	Screw		4	
167	MWSP4-50	Spacer		4	
168	XYN4+F16FXS	Screw		4	
169	XWG6	Washer		3	
170	XTT4+12FFY	Screw		7	

## 13.2 Optical Unit

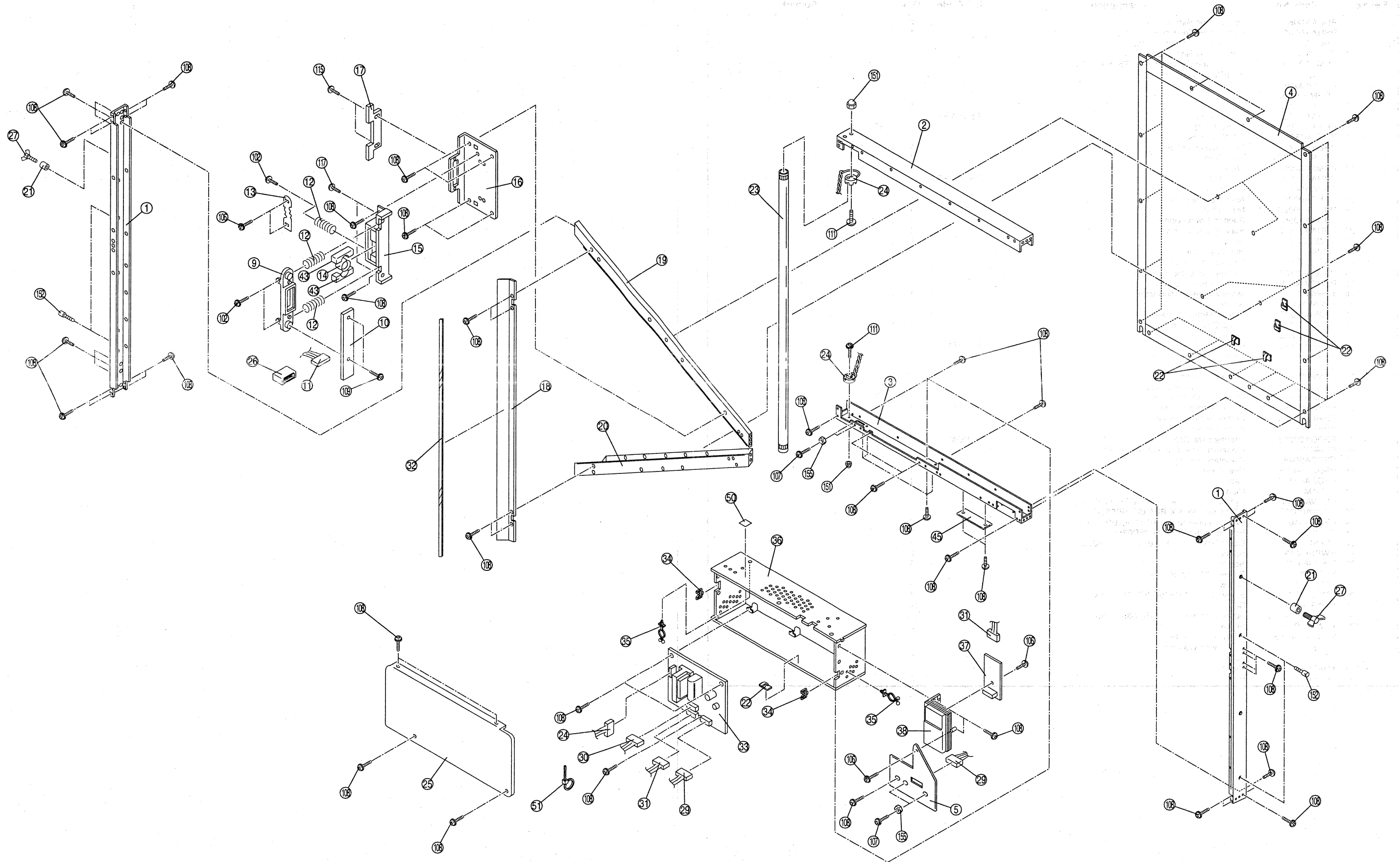
## 13.2.1 Optical Unit for KX-BP535/BP635



REPLACEMENT MECHANICAL PARTS LIST (Optical Unit for KX-BP535/BP635)

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBUAA0062Z	Optical Unit Side Frame		2	
2	PBUAA0053Z	Optical Unit Top Frame		1	
3	PBUAA0054Z	Optical Unit Bottom Frame		1	
4	PBUVA0017Z	Optical Unit Rear Cover		1	
5	PBMZA0029Z	Optical Unit Cover for KX-BP535/A/G/T/U/ KX-BP635/A/G/T/U		1	
6	PBUVA0019Z	Cover		1	
7	PBHMA0066Z	Pin		1	
8	PBHA0045Z	Pad		1	
9	PBHAA0023Z	CCD Holder	PS or ABS	1	
10	PBA304535-J	MAIN Board		1	(RTL)
11	PBJEA0569Z	MAIN Harness		1	
12	PBDSA0047Y	CCD Adjustment Spring		3	
13	PBUSA0013Z	Lens Spring		1	
14	PBMEA0020Z	Lens		1	
15	PBHAA0022Z	Lens Base	PS or ABS	1	
16	PBUAA0055Z	CCD Base		1	
17	PBMZA0020Z	Aperture Adjustment Plate		1	
18	PBUHA0002Z	Mirror Plate		1	
19	PBUAA0056Z	Support Frame Upper		1	
20	PBUAA0057Z	Support Frame Lower		1	
21	MWSP5-50	Spacer		2	
22	K-104G	Harness Hook		5	
23	PBFL35SS-D	Fluorescent Lamp		1	△
24	PBJEA0232Z	Fluorescent Lamp Harness		1	
25	PBMCA0040Z	POWER Board Cover		1	
26	175694-8	MAIN Harness Connector		1	
27	XVP5F12FX	Screw		2	
29	PBJEA0233Z	Screen Motor Harness		1	
30	PBJEA0571Z	Lamp Driver Harness		1	
31	PBJEA0585Z	Home Sensor Harness		1	
32	PBUEA0064Z	Mirror	PC or PET	1	
33	PBA313535-J	LAMP DRIVER Board		1	(RTL)
34	EDS-1208U	Harness Clamp		2	
35	TMM6428-1	Harness Clamp		2	
36	PBMCA0179Z	POWER Board Bracket		1	
37	PBA306535-J	HOME SENSOR Board		1	(RTL)
38	PBHRA0078Z	Home Sensor Holder	PS	1	
43	PBMMA0008Z	Screen Motor Bracket		1	
44	PBAMA0005Z	Screen Motor		1	△
45	PBDGA0028Z	Intermediate Gear	POM	1	
46	PBMDX0175Z	Planetary Gear Bracket (complete)		1	
47	PBDSA0048Z	Planetary Spring		1	
48	PBUCA0020Z	Gear Base		1	
50	PBQAA0840Z	Label		1	
51	PLT-1M	Clamper		1	
52	PBUVA0016Z	Optical Unit Cover for KX-BP535C/BP635C		1	
53	PBUVA0020Z	CCD Cover for KX-BP535C/BP635C		1	
54	PBQAA0407Z	Caution Label for KX-BP535C/BP635C		2	
55	CE-012S	Edging for KX-BP535C/BP635C		2	
56	PBHMA0068Z	Cover Bracket for KX-BP535C/BP635C		4	
91	RWPS6-013	Spacer		2	
92	RWPS6-025	Spacer		3	
102	XTP3+20FX	Screw (CCD Adjustment)		3	
106	XTW3+10PFY	Screw		3	
106	XTW3+10PFY	Screw for KX-BP535C/BP635C only		4	
108	XTW3+8LFX	Screw		88	
108	XTW3+8LFX	Screw for KX-BP535C/BP635C only		110	
109	XTW3+8PFX	Screw		2	
111	XYN3+J14FXS	Screw with Washer		2	
115	XYN3+J6FX	Screw with Washer		4	
117	XTP3+10FX	Screw		2	
151	XNA3FX	Cap Nut		2	
163	XUC5FY	E-ring		3	

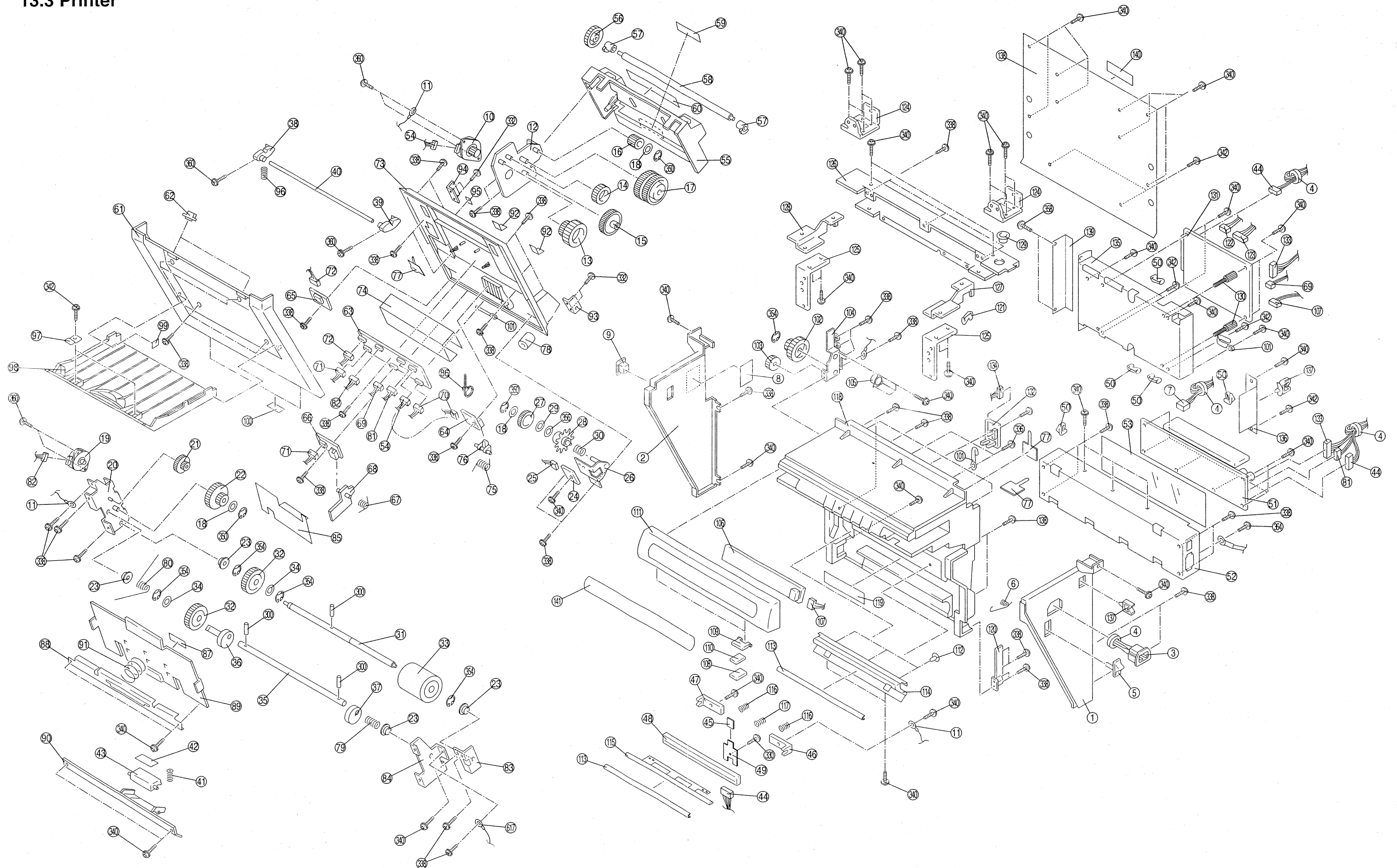
### 13.2.2 Optical Unit for KX-BP735



## REPLACEMENT MECHANICAL PARTS LIST (Optical Unit for KX-BP735)

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBUAA0062Z	Optical Unit Side Frame	PS or ABS	2	(RTL)
2	PBUAA0053Z	Optical Unit Top Frame		1	
3	PBUAA0054Z	Optical Unit Bottom Frame		1	
4	PBUVA0017Z	Optical Unit Rear Cover		1	
5	PBMDA0256Z	Screen Motor Connection Plate		1	
9	PBHAA0023Z	CCD Holder	PS or ABS	1	(RTL)
10	PBA304535-J	MAIN Board		1	
11	PBJEA0569Z	MAIN Harness		1	
12	PBDSA0047Y	CCD Adjustment Spring		3	
13	PBUSA0013Z	Lens Spring		1	
14	PBMEA0020Z	Lens	PS or ABS	1	(RTL)
15	PBHAA0022Z	Lens Base		1	
16	PBUAA0055Z	CCD Base		1	
17	PBMZA0020Z	Aperture Adjustment Plate		1	
18	PBUHA0002Z	Mirror Plate		1	
19	PBUAA0056Z	Support Frame Upper	PC or PET	1	(RTL)
20	PBUAA0057Z	Support Frame Lower		1	
21	MWSP5-50	Spacer		2	
22	K-104G	Harness Hook		5	
23	PBFL35SS-D	Fluorescent Lamp		1	
24	PBJEA0232Z	Fluorescent Lamp Harness Socket	PS	1	(RTL)
25	PBMCA0040Z	POWER Board Cover		1	
26	175694-8	MAIN Harness Connector		1	
27	XVP5F12FX	Screw		2	
29	PBJEA0328Z	Screen Motor Harness		1	
30	PBJEA0571Z	Lamp Driver Harness	PS	1	(RTL)
31	PBJEA0585Z	Home Sensor Harness		1	
32	PBUHA0064Z	Mirror		1	
33	PBA313535-J	LAMP DRIVER Board		1	
34	EDS-1208U	Harness Clamp		2	
35	TMM6428-1	Harness Clamp	PS	2	(RTL)
36	PBMDA0179Z	POWER Board Bracket		1	
37	PBA306535-J	HOME SENSOR Board		1	
38	PBHRA0078Z	Home Sensor Holder		1	
43	PBHSA0045Z	Pad		1	
45	PBUVA0019Z	Cover	PS	1	(RTL)
50	PBQAA0840Z	Label		1	
51	PLT-1M	Clamper		1	
102	XTP3+20FX	Screw (CCD Adjustment)		3	
106	XTW3+10PFY	Screw		4	
107	XTW3+12LFX	Screw	PS	3	(RTL)
108	XTW3+8LFX	Screw		78	
109	XTW3+8PFY	Screw		2	
111	XYN3+J14FXS	Screw with Washer		2	
115	XYN3+J6FX	Screw with Washer		2	
117	XTP3+10FX	Screw	PS	2	(RTL)
151	XNA3FX	Cap Nut		2	
152	XVE5B12FY	Screw		4	
155	XNG5EFX	E-ring		3	

## 13.3 Printer





REPLACEMENT MECHANICAL PARTS LIST (Printer)

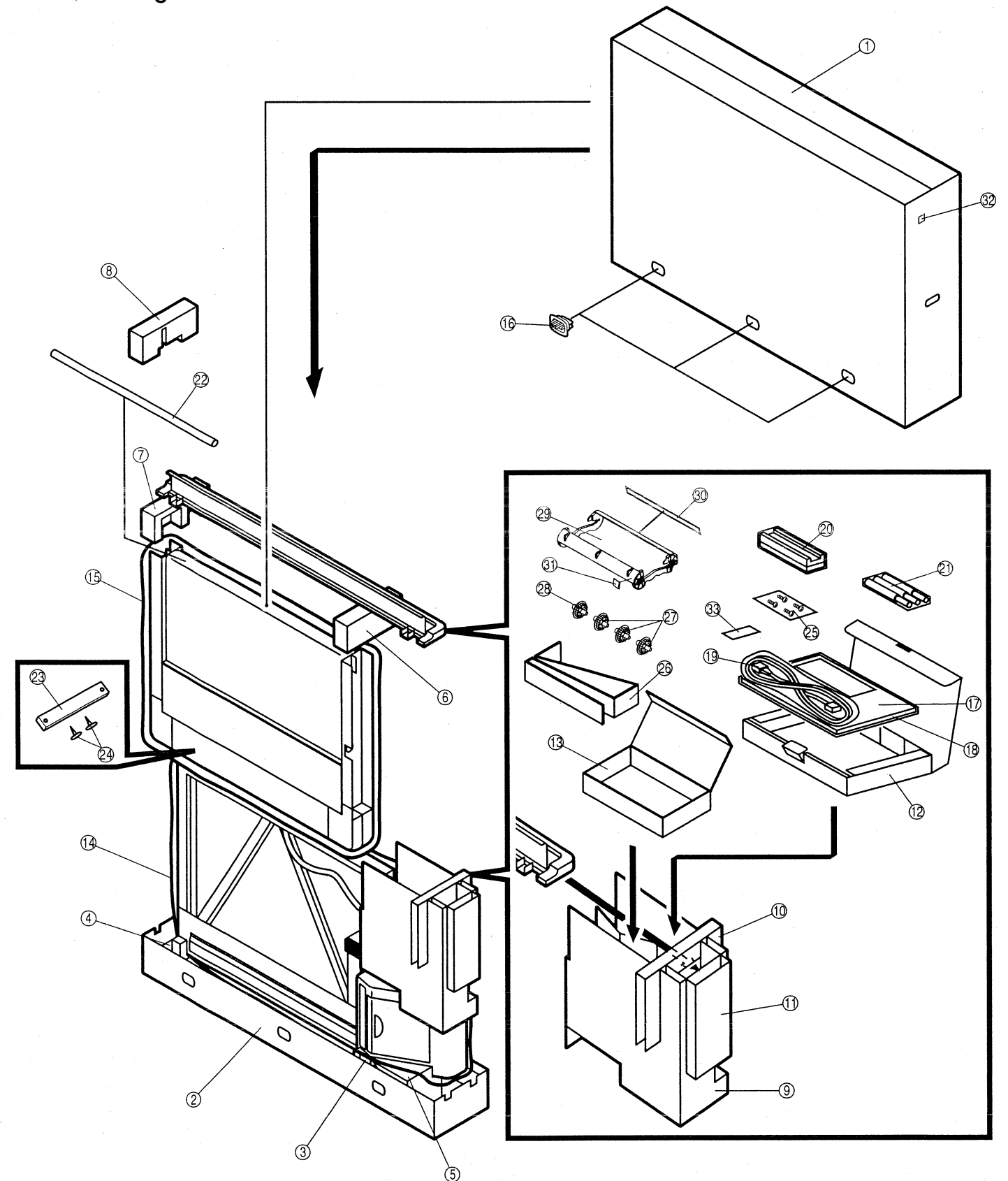
Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBKMA0071Z	Side Panel R	PS	1	△
2	PBKMA0072Z	Side Panel L	PS	1	△
3	PBJEA0578Z	AC Inlet with Harness (Power SW)		1	△
4	KR06TT281807	Ferrite Core		4	
5	PBBDA0004Z	Open Lever	ABS	1	
6	PBDSA0131Y	Open Spring		1	
7	PBJEA0577Y	Power SW with Harness (CN400)		1	△
8	PBQAA0759Z	Service Man Label		1	
9	SJW2F4A07BB	Power Switch		1	△
10	PBAMA0017Z	Platen Motor		1	△
11	PBJEA0617Z	Earth Cable		3	
12	PBMDX0526Z	Motor Plate		1	
13	PFDG1030Z	Idler Gear 1	POM	1	
14	PFDG1031Y	Idler Gear 2	POM	1	
15	PFDG1032Y	Idler Gear 3	POM	1	
16	PFDG1039Y	Ribbon Drive Gear A	POM	1	
17	PFDX1008Z	Wind Torque Limiter		1	
18	RWPS3-025	Spacer		3	
19	PBAMA0018Z	Stepping Motor, Dc 6.4W		1	△
20	PBMDX0524Z	Paper Feed Plate		1	
21	PFDG1009Z	Idler Gear C	POM	1	
22	PFDG1033Y	Gear	POM	1	
23	80F-0403	Spacer		4	
24	PBA311535-J	FILM END SENSOR Board		1	(RTL)
25	PBJEA0584Z	Cable (CN860-CN600)		1	
26	PBMDX0527Z	Encoder Plate		1	
27	PFDG1029Y	Ribbon Encoder Gear	POM	1	
28	PFDG1036Z	Encoder	ABS	1	
29	PFHG1030Z	Felt		1	
30	PFUS1065Z	Back Tension Spring		1	
31	PBDFA0152Z	Paper Feed Roller Shaft		1	
32	PBDGA0074Z	Paper Feed Roller Gear		2	
33	PBDRA0094Z	Paper Feed Roller		1	
34	RWPS6-025	Spacer		2	
35	PBDFA0155Z	Hopper Cam Shaft		1	
36	PBHRA0205Z	Hopper Cam A	POM	1	
37	PBHRA0206Z	Hopper Cam B	POM	1	
38	PFDE1037Z	Lock Lever L	POM	1	
39	PFDE1038Z	Lock Lever R	POM	1	
40	PFDF1016Z	Lock Lever Shaft		1	
41	PBDSA0130Z	Separate Spring		1	
42	PBHGA0058Y	Separate Pad		1	
43	PBHRA0203Y	Separate Pad Holder	ABS	1	
44	PBJEA0567Z	Cable (Thermal Head-CN6-CN402)		1	
45	PBHRA0212Z	Head Sheet		1	
46	PFDE1034Y	Head Holder L	POM	1	
47	PFDE1035Y	Head Holder R	POM	1	
48	PFJHS0008Z	Head		1	
49	PFMH1038Z	Head Fulcrum		1	
50	EDS-1208U	Edge Saddle		5	
51	PBA302535-J	POWER Board for KX-BP535/C/T/ KX-BP635/C/T/ KX-BP735/C/T/		1	△ (RTL)
51	PBA302535U-J	POWER Board for KX-BP535A/G/U/ KX-BP635A/G/U/ KX-BP735A/G/U/		1	△ (RTL)
52	PBMDA0265X	POWER Board Cover		1	
53	PBMXA0030Z	Insulation Sheet	PVC	1	
54	PBJEA0579Z	Cable (Printer Motor-CN605)		1	
55	PBKEA0108Z	Conveyor Upper	PS	1	
56	PFDG1027Y	Platen Drive Gear	POM	1	
57	PFDJ1011Z	Platen Support	POM	2	
58	PFDN1010Z	Roller		1	
59	PBHEA0185Z	Sheet	PET	1	
60	PBQAA0850Z	Label		1	
61	PBKEA0109Z	Conveyor Lower	PS	1	△
62	2Y40-1-5	Magnet		2	
63	PBA307535-J	MOTOR DRIVER Board		1	(RTL)
64	PBA308535-J	TOP SENSOR Board		1	(RTL)
65	PBA309535-J	HOPPER SENSOR Board		1	(RTL)
66	PBA312535-J	PAPER SENSOR Board		1	(RTL)
67	PBDSA0141X	Actuator Spring		1	
68	PBHRA0209X	Actuator	ABS	1	
69	PBJEA0568Y	Cable (CN3-CN5-CN604)		1	

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
70	PBJEA0581Z	Cable (CN800-CN603)		1	
71	PBJEA0582Z	Cable (CN880-CN602)		1	
72	PBJEA0583Z	Cable (CN820-CN601)		1	
73	PBKEA0107Z	Main Conveyor	ABS	1	
74	PBMXA0041Y	Sheet Cover	PVC	1	
75	PFUS1076Z	Top Sensor Spring		1	
76	PQDE10055Z	Top Sensor Lever	POM	1	
77	K-104G	Harness Clamp		3	
78	PBMXA0052Z	Insulator Tube		1	
79	PBDSA0139Z	Cam Shaft Spring		1	
80	PBDSA0140Z	Ground Spring		1	
81	PBJEA0576Z	Cable (CN403-CN607)		1	
82	PBJEA0580Z	Cable (Paper Feed Motor-CN606)		1	
83	PBMDA0525Z	Roller Plate		1	
84	PBMDA0556Z	Cam Shaft Plate		1	
85	PBHEA0178Z	Paper Feed Sheet	PET	1	
86	PLT-1M	Clamper		1	
87	PBHGA0059Z	Plate Pad		1	
88	PBMDA0562Z	Hopper Bracket		1	
89	PBMEA0048Z	Hopper Plate		1	
90	PBMEA0052Z	Hopper Base		1	
91	PFUS1087Z	Spring		1	
92	PBHEA0179Z	Platen Sheet	PET	2	
93	PBMEA0056Z	Open Fulcrum R		1	
94	PBMEX0055Z	Open Fulcrum L		1	
95	PBQAA0841Z	Blue Label		1	
96	PFUS1080Z	Lock Lever Spring		1	
97	PBHMA0169Z	Magnet Plate		2	
98	PBKMA0069Z-1	Paper Cover for KX-BP535A/G/T/U/ KX-BP635A/G/T/U/ KX-BP735A/G/T/U/	PS	1	△
98	PBKMA0069Z-2	Paper Cover for KX-BP535/C KX-BP635/C KX-BP735/C	PS	1	△
99	PBQAA0756Z	Carry Label		1	
100	PBHEA0180Z	Conveyor Sheet	PET	2	
101	CS-2	Clip		3	
102	PBDGA0081Z	Gear B	POM	1	
103	PBDGA0082Z	Gear A		1	
104	PBMEX0054Z	Reinforcement Plate		1	
105	4W41F99R	Damper		1	
106	PBA305535-J	PANEL Board		1	(RTL)
107	PBJEA0574Y	Cable (CN4-CN200)		1	
108	PBHGA0060Y	Stopper Rubber		2	
109	PBHRA0216Z	Stopper Bracket		2	
110	PBHMA0178Z	Stopper Plate		2	
111	PBKMA0070Z	Front Panel	PS	1	△
112	PBHRA0217Z	Spring Bushing		3	
113	PFHX1115Z	Ribbon Guide Sheet		2	
114	PFMD1018Z	Head Frame		1	
115	PFMH1036Z	Ribbon Guide		1	
116	PFUS1083Z	Thermal Head Spring		2	
117	PFUS1088Z	Head Center Spring		1	
118	PBKEA0110Z	Base	PS	1	△
119	PBQAA0851Z	Head Caution Label		1	
120	PBMEX0053Z	Reinforcement Plate R		1	
121	EDS-1208U	Edge Saddle		1	
122	PBJEA0570Z	Cable (CN8-Connector)		1	
123	PBJEA0572Z	Cable (CN7)		1	
124	PBMDA0177Z	Printer Fitting Plate		2	
125	PBMDA0564Z	POWER Board Cover		2	
126	PBULA0152Z	Printer Reinforcement Plate		1	
127	PBULA0163Z	Plate R		1	
128	PBULA0164Z	Plate L		1	
129	TB-1116	Bush		1	
130	BSB-308-6	Stud-Screw		1	
131	PBA303BP535U	SUB Board		1	
132	PBA310535-J	DOOR SENSOR Board		1	(RTL)
133	PBJEA0573Z	Cable (CN1-CN401)		1	
134	PBJEA0575Z	Cable (CN2-CN840)		1	
135	PBMDA0249Y	MAIN Board Fitting Plate		1	
136	PBUVA0030Z	Shield Plate		1	
137	WS-2NS-V0	Clamper		2	
138	PBUVA0031Z	Back Cover		1	
139	PBUVA0032Z	Plate Cover		1	
140	PBQAA0276Y	Caution Label		1	

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
141	PBGPA0062Z	Panel Sheet for KX-BP535 Series	PVC	1	△
141	PBGPA0063Z	Panel Sheet for KX-BP635 Series	PVC	1	△
141	PBGPA0064Z	Panel Sheet for KX-BP735 Series	PVC	1	△
300	XPJ2C10VW	Pin		3	
330	XTB3+5FFX	Screw		1	
332	XTV3+14GFX	Screw		4	
336	XTW3+10LFX	Screw		2	
338	XTW3+10PFX	Screw		49	
340	XTW3+6LFX	Screw		52	
342	XTW3+8PFZ	Screw		7	
350	XUC2FY	E-ring		2	
354	XUC5FY	E-ring		5	
356	XWE5VW	Washer		1	
358	XYE3+EF8FY	Screw with Washer		2	
360	XYN3+J6FX	Screw with Washer		6	
364	XYN4+F6FXS	Screw with Washer		1	

## 13.4 Packing Parts

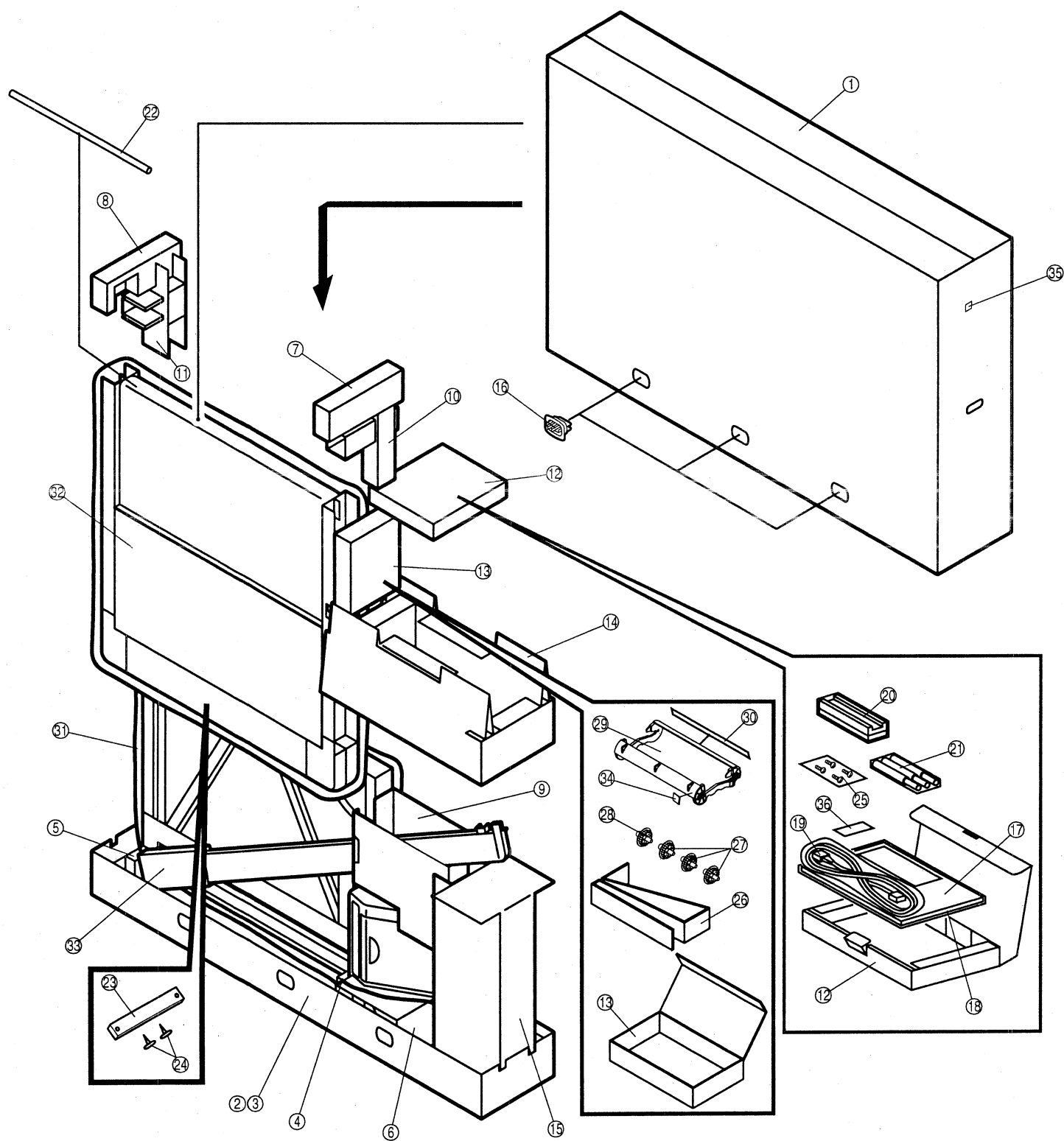
## 13.4.1 Packing for KX-BP535



## REPLACEMENT MECHANICAL PARTS LIST (Packing for KX-BP535)

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBPGA0328Y	Outer Carton for KX-BP535		1	
1	PBPGA0328Y-A	Outer Carton for KX-BP535A		1	
1	PBPGA0328Y-C	Outer Carton for KX-BP535C		1	
1	PBPGA0328Y-G	Outer Carton for KX-BP535G		1	
1	PBPGA0328Y-T	Outer Carton for KX-BP535T		1	
1	PBPGA0328Y-U	Outer Carton for KX-BP535U		1	
2	PBPGA0329Z	Bottom Carton		1	
3	PBPNA0179Z	Cushion (right-bottom)		1	
4	PBPNA0180Z	Cushion (left-bottom)		1	
5	PBPNA0181Z	Cushion (Printer-bottom)		1	
6	PBPNA0182Z	Cushion (right-top)		1	
7	PBPNA0183Z	Cushion (left-top)		1	
8	PBPNA0185Z	Cushion (Frame Cover)		1	
9	PBPNA0184Y	Cushion (Printer A-top)		1	
10	PBPNA0253Z	Cushion (Printer B-top)		1	
11	PBPNA0246Z	Cushion (Printer C-top)		1	
12	PBPNA0227Y	Parts Box		1	
13	PBPNA0218Z	Box for Thermal Transfer Film/Film Cassette		1	
14	PBPPA0023Z	Vinyl Bag for Scanner/Printer Unit	PE	1	
15	PBPPA0008Z	Vinyl Bag for Screen Unit	PE	1	
16	HP-601W2-R	Joint	PP	6	
17	PBQX50242Z	Operation Manual for KX-BP535A/C/G/T/U		1	
17	PBQX50246Z	Operation Manual for KX-BP535		1	
18	PBQX50243Y	Installation Manual for KX-BP535A/C/G/T/U		1	
19	PBJA4Z40	AC Power Cord for KX-BP535/C/T		1	△
19	PBJA5Z	AC Power Cord for KX-BP535G/SP/GJ		1	△
19	PBJAA0007Z	AC Power Cord for KX-BP535U		1	△
19	PBJA8Z40	AC Power Cord for KX-BP535A		1	△
20	PBPBA0004Z	Eraser		1	
21	PBPBA0005Z	Marker		1	
22	PBHPA0001Z	Fold up Roller	PVC	1	
23	PBPEA0014Z	Sheet	PE	1	
24	NF-2000+2008	Bush		2	
25	XYN4+16FXS	Screw		4	
26	PBPNA0247Z	Box Partition		1	
27	PFDG1037	Green Gear	POM	3	
28	PFDG1038ZA1	Blue Gear	POM	1	
29	PFHR1073ZA-1	Ribbon Cassette	PS	1	
30	PBQAA0852Y	Label		1	
31	PBQAA0841Z	Label		1	
32	PJPEA0110Z	Label for KX-BP535A		1	
33	PBQAA0644Z	AC Label for KX-BP535C		1	
	PBPFA0002Z	Paper Board		1	
	PBQAA0571Z	Label		1	
	PBQF90072Z	Caution Bill for KX-BP535A/G/T/U		1	
	PBQX90058Z	Bill		1	
	PBQF90079Z	Screen Bill		1	
	PBHGA0061Z	Rubber		1	
	PBPQA0063Z	Thumb Screw Cushion	PE	1	
	PBQX90120Z	Rubber Bill		1	
	PBQX90039Z	Bill		1	
	PBQX70017Z	Guaranty for KX-BP535		1	

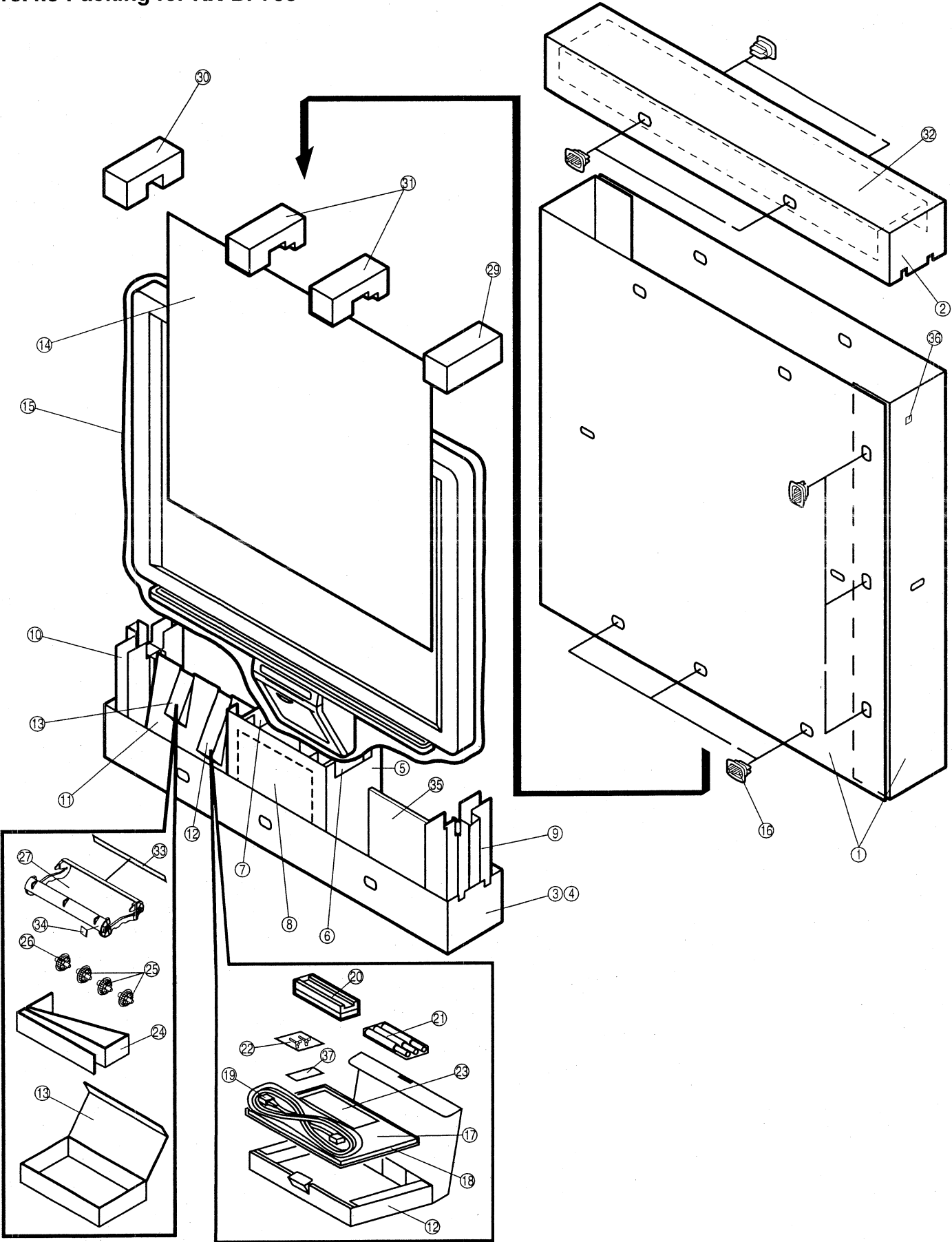
### 13.4.2 Packing for KX-BP635



## REPLACEMENT MECHANICAL PARTS LIST (Packing for KX-BP635)

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBPGA0330Y	Outer Carton for KX-BP635		1	
1	PBPGA0330Y-A	Outer Carton for KX-BP635A		1	
1	PBPGA0330Y-C	Outer Carton for KX-BP635C		1	
1	PBPGA0330Y-G	Outer Carton for KX-BP635G		1	
1	PBPGA0330Y-T	Outer Carton for KX-BP635T		1	
1	PBPGA0330Y-U	Outer Carton for KX-BP635U		1	
2	PBPGA0331Z	Bottom Carton		1	
3	PBPNA0189Z	Bottom Plate		1	
4	PBPNA0219Z	Cushion (right-bottom)		1	
5	PBPNA0220Z	Cushion (left-bottom)		1	
6	PBPNA0221Z	Cushion (Printer-bottom)		1	
7	PBPNA0222Z	Cushion (right-top)		1	
8	PBPNA0223Z	Cushion (left-top)		1	
9	PBPNA0190Z	Cushion (Printer-top)		1	
10	PBPNA0186Z	Cushion (right-top another piece)		1	
11	PBPNA0225Z	Cushion (left-top another piece)		1	
12	PBPNA0227Y	Parts Box		1	
13	PBPNA0218Z	Box for Thermal Transfer Film/Film Cassette		1	
14	PBPPA0187Z	Cushion (right-top spacer)		1	
15	PBPPA0188Z	Cushion (right-center sleeve)		1	
16	HP-601W2-R	Joint	PP	6	
17	PBQX50242Z	Operation Manual for KX-BP635A/C/G/T/U		1	
17	PBQX50246Z	Operation Manual for KX-BP635		1	
18	PBQX50243Y	Installation Manual for KX-BP635A/C/G/T/U		1	
19	PBJA4Z40	AC Power Cord for KX-BP635/C/T		1	△
19	PBJA5Z	AC Power Cord for KX-BP635G/SP/GJ		1	△
19	PBJAA0007Z	AC Power Cord for KX-BP635U		1	△
19	PBJA8Z40	AC Power Cord for KX-BP635A		1	△
20	PBPBA0004Z	Eraser		1	
21	PBPBA0005Z	Marker		1	
22	PBHRA0001Z	Fold up Roller	PVC	1	
23	PBPEA0014Z	Sheet		1	
24	NF-2000+2008	Bush		2	
25	XYN4+16FXS	Screw		4	
26	PBPNA0247Z	Box Partition		1	
27	PFDG1037	Green Gear	POM	3	
28	PFDG1038ZA1	Blue Gear	POM	1	
29	PFHR1073ZA1	Film Cassette	PS	1	
30	PBQAA0852Y	Label		1	
31	PBPAA0023Z	Vinyl Bag for Scanner/Printer Unit	PE	1	
32	PBPPA0008Z	Vinyl Bag for Screen Unit	PE	1	
33	PBPNA0226Z	Sleeve (Frame Cover)		1	
34	PBQAA0841Z	Label		1	
35	PJPEA0110Z	Label for KX-BP635A		1	
36	PBQAA0644Z	AC Label for KX-BP635C		1	
	PBPQA0063Z	Thumb Screw Cushion	PE	1	
	PBPHA0002Z	Paper Board		1	
	PBQAA0571Z	Label		1	
	PBQF90072Z	Caution Bill for KX-BP635A/G/T/U		1	
	PBQX90058Z	Bill		1	
	PBQF90079Z	Screen Bill		1	
	PBHGA0061Z	Rubber		1	
	PBQX90120Z	Rubber Bill		1	
	PBQX90039Z	Bill		1	
	PBQX70017Z	Guaranty for KX-BP635		1	

13.4.3 Packing for KX-BP735




## REPLACEMENT MECHANICAL PARTS LIST (Packing for KX-BP735)

Ref No.	Parts No.	Description	ISO Code	Q'ty	Remark
1	PBPGA0332Y	Outer Carton Plate for KX-BP735		2	
1	PBPGA0332Y-A	Outer Carton Plate for KX-BP735A		2	
1	PBPGA0332Y-C	Outer Carton Plate for KX-BP735C		2	
1	PBPGA0332Y-G	Outer Carton Plate for KX-BP735G		2	
1	PBPGA0332Y-T	Outer Carton Plate for KX-BP735T		2	
1	PBPGA0332Y-U	Outer Carton Plate for KX-BP735U		2	
2	PBPGA0333Z	Top Carton		1	
3	PBPGA0334Z	Bottom Carton		1	
4	PBPNA0199Z	Bottom Plate		1	
5	PBPNA0191Z	Support Carton		1	
6	PBPNA0194Z	Cushion for Printer (right)		1	
7	PBPNA0195Z	Cushion for Printer (left)		1	
8	PBPNA0201Z	Cushion for Printer (spacer)		1	
9	PBPNA0192Y	Cushion (right-bottom)		1	
10	PBPNA0193Y	Cushion (left-bottom)		1	
11	PBPNA0248Z	Box Support		1	
12	PBPNA0227Y	Parts Box		1	
13	PBPNA0218Z	Box for Thermal Transfer Film/Film Cassette		1	
14	PBPNA0200Z	Protection Board		1	
15	PBPPA0024Z	Vinyl Bag		1	
16	HP-601W2-R	Joint	PP	16	
17	PBQX50242Z	Operation Manual for KX-BP735A/C/G/T/U		1	
17	PBQX50246Z	Operation Manual for KX-BP735		1	
18	PBQX50243Y	Installation Manual for KX-BP735A/C/G/T/U		1	
19	PBJA4Z40	AC Power Cord for KX-BP735/C/T		1	△
19	PBJA5Z	AC Power Cord for KX-BP735G/SP/GJ		1	△
19	PBJAA0007Z	AC Power Cord for KX-BP735U		1	△
19	PBJA8Z40	AC Power Cord for KX-BP735A		1	△
20	PBPBA0004Z	Eraser		1	
21	PBPBA0005Z	Marker		1	
22	XVP4F12FX	Wing Bolt		2	
23	PBQX90047Y	Wall-mounting Template		1	
24	PBPNA0247Z	Box Partition		1	
25	PFDG1037	Green Gear	POM	3	
26	PFDG1038ZA1	Blue Gear	POM	1	
27	PFHR1073ZA1	Film Cassette	PS	1	
29	PBPNA0196Z	Cushion (right-top)		1	
30	PBPNA0197Z	Cushion (left-top)		1	
31	PBPNA0198Z	Cushion (center-top)		2	
32	PBPNA0202Z	Top Carton Reinforcement		1	
33	PBQAA0852Y	Label		1	
34	PBQAA0841Z	Label		1	
35	PBPNA0254Z	Bottom Cushion Spacer		1	
36	PJPEA0110Z	Label for KX-BP735A		1	
37	PBQAA0644Z	AC Label for KX-BP735C		1	
	PBPNA0003Z	Protect Paper		1	
	PBQX90059Z	Caution Bill		1	
	PBQX70017Z	Guaranty for KX-BP735		1	

SECTION 14  
REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Notes: RTL (Retention Time Limited)

The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention.  
After the end of this period, the assembly will no longer be available.

Abbreviation of Part Name and Description

1. Resistor

Example:

ERJ6GEYJ472    C 4.7k, J, 1/10W  
                            TYPE        ALLOWANCE

TYPE	ALLOWANCE
C : Carbon	F : ±1%
F : Fuse	G : ±2%
M : Metal Oxide	J : ±5%
Metal Film	K : ±10%
S : Solid	M : ±20%
W : Wire Wound	

2. Capacitor

Example:

ECUX1H104ZFX    C 0.1, Z, 50V  
                            TYPE        ALLOWANCE

TYPE	ALLOWANCE
C : Ceramic	C : ±0.25 pF
E : Electrolytic	D : ±0.5 pF
P : Polyester	F : ±1 pF
Polypropylene	J : ±5%
T : Tantalum	K : ±10%
	L : ±15%
	M : ±20%
	P : +100%, -0%
	Z : +80%, -20%

SUB Board

Ref No.	Parts No.	Description
	<b>RESISTORS</b>	
R1	ERJ6GEYJ472	C    4.7k, J, 1/10W
R2	ERJ6GEYJ102	C    1k, J, 1/10W
R3	ERJ6GEYJ102	C    1k, J, 1/10W
R4	ERJ6GEYJ102	C    1k, J, 1/10W
R5	ERJ6GEYJ102	C    1k, J, 1/10W
R6	ERJ6GEYJ102	C    1k, J, 1/10W
R7	ERJ6GEYJ470	C    47, J, 1/10W
R8	ERJ6GEYJ103	C    10k, J, 1/10W
R9	ERJ6GEYJ472	C    4.7k, J, 1/10W
R10	ERJ6GEYJ102	C    1k, J, 1/10W
R11	ERJ6GEYJ470	C    47, J, 1/10W
R12	ERJ6GEYJ470	C    47, J, 1/10W
R13	ERJ6GEYJ472	C    4.7k, J, 1/10W
R14	ERJ6GEYJ101	C    100, J, 1/10W
R18	ERJ6GEYJ101	C    100, J, 1/10W
R19	ERJ6GEYJ472	C    4.7k, J, 1/10W
R20	ERJ6GEYJ103	C    10k, J, 1/10W
R21	ERJ6GEYJ472	C    4.7k, J, 1/10W
R22	ERJ6GEYJ101	C    100, J, 1/10W
R23	ERJ6GEYJ101	C    100, J, 1/10W
R24	ERJ6GEYJ101	C    100, J, 1/10W
R25	ERJ6GEYJ101	C    100, J, 1/10W
R26	ERJ6GEYJ361	C    3.6k, J, 1/10W
R27	ERJ6GEYJ102	C    1k, J, 1/10W
R28	ERJ6GEYJ472	C    4.7k, J, 1/10W
R29	ERJ6GEYJ472	C    4.7k, J, 1/10W
R30	ERJ6GEYJ472	C    4.7k, J, 1/10W
R31	ERJ6GEYJ470	C    47, J, 1/10W
R32	ERJ6GEYJ470	C    47, J, 1/10W

Ref No.	Parts No.	Description
R33	ERJ6GEYJ472	C    4.7k, J, 1/10W
R34	ERJ6GEYJ470	C    47, J, 1/10W
R36	ERJ6GEYJ101	C    100, J, 1/10W
R37	ERJ6GEYJ102	C    1k, J, 1/10W
R38	ERJ6GEYJ102	C    1k, J, 1/10W
R39	ERJ6GEYJ102	C    1k, J, 1/10W
R40	ERJ6GEYJ102	C    1k, J, 1/10W
R41	ERJ6GEYJ102	C    1k, J, 1/10W
R42	ERJ6GEYJ102	C    1k, J, 1/10W
R43	ERJ6GEYJ102	C    1k, J, 1/10W
R44	ERJ6GEYJ102	C    1k, J, 1/10W
R45	ERJ6GEYJ105	C    100k, J, 1/10W
R46	ERJ6GEYJ470	C    47, J, 1/10W
R47	ERJ6GEYJ470	C    47, J, 1/10W
R48	ERJ6GEYJ470	C    47, J, 1/10W
R49	ERJ6GEYJ151	C    150, J, 1/10W
R50	ERJ6GEYJ151	C    150, J, 1/10W
R51	ERJ6GEYJ151	C    150, J, 1/10W
R52	ERJ6GEYJ151	C    150, J, 1/10W
R53	ERJ6GEYJ151	C    150, J, 1/10W
R54	ERJ6GEYJ151	C    150, J, 1/10W
R55	ERJ6GEYJ151	C    150, J, 1/10W
R57	ERJ6GEYJ470	C    47, J, 1/10W
R58	ERJ6GEYJ470	C    47, J, 1/10W
R59	ERJ6GEYJ472	C    4.7k, J, 1/10W
R60	ERJ6GEYJ103	C    10k, J, 1/10W
R61	ERJ6GEYJ101	C    100, J, 1/10W
R62	ERJ6GEYJ101	C    100, J, 1/10W
R63	ERJ6GEYJ103	C    10k, J, 1/10W
R64	ERJ6GEYJ470	C    47, J, 1/10W



## SUB Board (continued)

Ref No.	Parts No.	Description
R65	ERJ6GEYJ470	C 47, J, 1/10W
R66	ERJ6GEYJ470	C 47, J, 1/10W
R67	ERJ6GEYJ470	C 47, J, 1/10W
R68	ERJ6GEYJ470	C 47, J, 1/10W
R69	ERJ6GEYJ470	C 47, J, 1/10W
R70	ERJ6GEYJ470	C 47, J, 1/10W
R71	ERJ6GEYJ470	C 47, J, 1/10W
R72	ERJ6GEYJ470	C 47, J, 1/10W
R73	ERJ6GEYJ470	C 47, J, 1/10W
R74	ERJ6GEYJ470	C 47, J, 1/10W
R75	ERJ6GEYJ470	C 47, J, 1/10W
R76	ERJ6GEYJ470	C 47, J, 1/10W
R77	ERJ6GEYJ470	C 47, J, 1/10W
R78	ERJ6GEYJ472	C 4.7K, J, 1/10W
R79	ERJ6GEYJ472	C 4.7K, J, 1/10W
R80	ERJ6GEYJ472	C 4.7K, J, 1/10W
R81	ERJ6GEYJ472	C 4.7K, J, 1/10W
R82	ERJ6GEYJ472	C 4.7K, J, 1/10W
R83	ERJ6GEYJ680	C 68, J, 1/10W
R84	ERJ6GEYJ103	C 10K, J, 1/10W
R85	ERJ6GEYJ222	C 22K, J, 1/10W
R86	ERJ6GEYJ471	C 470, J, 1/10W
R87	ERJ6GEYJ102	C 1K, J, 1/10W
R88	ERJ6GEYJ471	C 470, J, 1/10W
R89	ERJ6GEYJ101	C 100, J, 1/10W
R90	ERJ6GEYJ151	C 150, J, 1/10W
R91	ERJ6GEYJ151	C 150, J, 1/10W
R92	ERJ6GEYJ151	C 150, J, 1/10W
J1	ERJ6GEY0R00	0-ohm Jumper
J2	ERJ6GEY0R00	0-ohm Jumper
J4	ERJ6GEY0R00	0-ohm Jumper
J5	ERJ6GEY0R00	0-ohm Jumper
J6	ERJ6GEY0R00	0-ohm Jumper
J7	ERJ6GEY0R00	0-ohm Jumper
J8	ERJ6GEY0R00	0-ohm Jumper
J9	ERJ6GEY0R00	0-ohm Jumper
J10	ERJ6GEY0R00	0-ohm Jumper
J11	ERJ6GEY0R00	0-ohm Jumper
J12	ERJ6GEY0R00	0-ohm Jumper
J13	ERJ6GEY0R00	0-ohm Jumper
J14	ERJ6GEY0R00	0-ohm Jumper
J15	ERJ6GEY0R00	0-ohm Jumper
Z1	MNR14E0AJ472	Resistor Array
Z2	MNR14E0AJ472	Resistor Array
Z3	MNR14E0AJ470	Resistor Array
Z4	MNR14E0AJ470	Resistor Array
Z5	MNR14E0AJ470	Resistor Array
Z6	MNR14E0AJ470	Resistor Array
Z7	MNR14E0AJ470	Resistor Array
Z8	MNR14E0AJ470	Resistor Array
Z9	MNR14E0AJ472	Resistor Array
Z10	MNR14E0AJ472	Resistor Array
Z11	MNR14E0AJ470	Resistor Array
Z15	MNR14E0AJ472	Resistor Array
Z16	MNR14E0AJ470	Resistor Array
Z17	MNR14E0AJ470	Resistor Array
Z18	MNR14E0AJ470	Resistor Array
Z19	MNR14E0AJ470	Resistor Array
Z20	MNR14E0AJ472	Resistor Array
Z21	MNR14E0AJ103	Resistor Array
Z22	MNR14E0AJ101	Resistor Array
Z23	MNR14E0AJ103	Resistor Array
Z24	MNR14E0AJ103	Resistor Array
Z25	MNR14E0AJ103	Resistor Array
Z26	MNR14E0AJ103	Resistor Array
Z27	MNR14E0AJ103	Resistor Array
Z28	MNR14E0AJ103	Resistor Array
Z29	MNR14E0AJ103	Resistor Array
Z30	MNR14E0AJ101	Resistor Array
Z31	MNR14E0AJ101	Resistor Array
Z32	MNR14E0AJ101	Resistor Array
Z33	MNR14E0AJ470	Resistor Array
<b>CAPACITORS</b>		
C1	ECUX1H104ZFX	C 0.1, Z, 50V
C2	ECEV1VA220SP	E 22, 50V
C3	ECUX1H104ZFX	C 0.1, Z, 50V
C4	ECEV1CA470SP	E 47, 16V
C5	ECEV1CA470SP	E 47, 16V
C6	ECUX1H104ZFX	C 0.1, Z, 50V
C7	ECUX1H101JCG	C 100p, J, 50V
C8	ECUX1H101JCG	C 100p, J, 50V

Ref No.	Parts No.	Description
C9	ECUX1H101JCG	C 100p, J, 50V
C10	ECUX1H101JCG	C 100p, J, 50V
C11	ECUX1H101JCG	C 100p, J, 50V
C12	ECUX1H104ZFX	C 0.1, Z, 50V
C13	ECUX1H104ZFX	C 0.1, Z, 50V
C14	ECUX1H104ZFX	C 0.1, Z, 50V
C15	ECUX1H104ZFX	C 0.1, Z, 50V
C16	ECUX1H104ZFX	C 0.1, Z, 50V
C17	ECUX1H101JCG	C 100p, J, 50V
C18	ECUX1H101JCG	C 100p, J, 50V
C19	ECUX1H101JCG	C 100p, J, 50V
C20	ECUX1H101JCG	C 100p, J, 50V
C21	ECUX1H104ZFX	C 0.1, Z, 50V
C22	ECUX1H104ZFX	C 0.1, Z, 50V
C23	ECEV1CA470SP	E 47, 16V
C24	ECUX1H104ZFX	C 0.1, Z, 50V
C25	ECUX1H104ZFX	C 0.1, Z, 50V
C26	ECUX1H104ZFX	C 0.1, Z, 50V
C27	ECUX1H104ZFX	C 0.1, Z, 50V
C28	ECUX1H104ZFX	C 0.1, Z, 50V
C29	ECUX1H103ZFG	C 0.01, Z, 50V
C30	ECUX1H104ZFX	C 0.1, Z, 50V
C31	ECUX1H100CCN	C 10p, C, 50V
C33	ECUX1H104ZFX	C 0.1, Z, 50V
C34	ECUX1H102ZFN	C 1000p, Z, 50V
C36	ECUX1H150JCN	C 15p, J, 50V
C37	ECUX1H471JCX	C 470p, J, 50V
C38	ECUX1H471JCX	C 470p, J, 50V
C39	ECUX1H471JCX	C 470p, J, 50V
C40	ECUX1H471JCX	C 470p, J, 50V
C41	ECUX1H471JCX	C 470p, J, 50V
C42	ECUX1H471JCX	C 470p, J, 50V
C43	ECUX1H471JCX	C 470p, J, 50V
C44	ECUX1H471JCX	C 470p, J, 50V
C45	ECUX1H103ZFG	C 0.01, Z, 50V
C46	ECUX1H102ZFN	C 1000p, Z, 50V
C47	ECUX1H103ZFG	C 0.01, Z, 50V
C48	ECUX1H102ZFN	C 1000p, Z, 50V
C49	ECUX1H471JCX	C 470p, J, 50V
C50	ECUX1H471JCX	C 470p, J, 50V
C51	ECUX1H471JCX	C 470p, J, 50V
C52	ECUX1H471JCX	C 470p, J, 50V
C53	ECUX1H101JCG	C 100p, J, 50V
C54	ECUX1H101JCG	C 100p, J, 50V
C55	ECUX1H221JCG	C 220p, J, 50V
C56	ECUX1H101JCG	C 100p, J, 50V
C57	ECUX1H101JCG	C 100p, J, 50V
C58	ECUX1H101JCG	C 100p, J, 50V
C59	ECUX1H102ZFN	C 1000p, Z, 50V
C60	ECUX1H103ZFG	C 0.01, Z, 50V
C61	ECUX1H102ZFN	C 1000p, Z, 50V
C62	ECUX1H103ZFG	C 0.01, Z, 50V
C63	ECUX1H102ZFN	C 1000p, Z, 50V
C64	ECUX1H103ZFG	C 0.01, Z, 50V
C65	ECUX1H104ZFX	C 0.1, Z, 50V
C66	ECUX1H104ZFX	C 0.1, Z, 50V
C67	ECUX1H104ZFX	C 0.1, Z, 50V
C68	ECUX1H101JCG	C 100p, J, 50V
C69	ECUX1H104ZFX	C 0.1, Z, 50V
C70	ECUX1H101JCG	C 100p, J, 50V
C71	ECUX1H101JCG	C 100p, J, 50V
C72	ECUX1H101JCG	C 100p, J, 50V
C73	ECUX1H101JCG	C 100p, J, 50V
C74	ECUX1H101JCG	C 100p, J, 50V
C75	ECUX1H104ZFX	C 0.1, Z, 50V
C76	ECUX1H101JCG	C 100p, J, 50V
C77	ECUX1H101JCG	C 100p, J, 50V
C78	ECUX1H101JCG	C 100p, J, 50V
C79	ECUX1H101JCG	C 100p, J, 50V
C80	ECUX1H101JCG	C 100p, J, 50V
C81	ECUX1H101JCG	C 100p, J, 50V
C82	ECUX1H101JCG	C 100p, J, 50V
C83	ECUX1H101JCG	C 100p, J, 50V
C84	ECUX1H101JCG	C 100p, J, 50V
C85	ECUX1H101JCG	C 100p, J, 50V
C86	ECUX1H101JCG	C 100p, J, 50V
C87	ECUX1H101JCG	C 100p, J, 50V
C88	ECUX1H100CCN	C 10p, C, 50V
C113	ECUX1H104ZFX	C 0.1, Z, 50V
C114	ECUX1H101JCG	C 100p, J, 50V
C115	ECUX1H102ZFN	C 1000p, Z, 50V
C116	ECUX1H102ZFN	C 1000p, Z, 50V

KX-BP535/BP635/BP735 Series

SUB Board (continued)

Ref No.	Parts No.	Description
C117	ECUX1H102ZFN	C 1000p, Z, 50V
C118	ECUX1H102ZFN	C 1000p, Z, 50V
C119	ECUX1H102ZFN	C 1000p, Z, 50V
C120	ECUX1H102ZFN	C 1000p, Z, 50V
C121	ECUX1H102ZFN	C 1000p, Z, 50V
C122	ECUX1H102ZFN	C 1000p, Z, 50V
C123	ECUX1H102ZFN	C 1000p, Z, 50V
C124	ECUX1H102ZFN	C 1000p, Z, 50V
C125	ECUX1H101JCG	C 100p, J, 50V
C126	ECUX1H101JCG	C 100p, J, 50V
C127	ECUX1H101JCG	C 100p, J, 50V
C128	ECUX1H102ZFN	C 1000p, Z, 50V
C129	ECUX1H102ZFN	C 1000p, Z, 50V
C130	ECUX1H100CCN	C 10p, C, 50V
Z34	MNA145A100KK	Capacitor Array
Z35	MNA145A100KK	Capacitor Array
Z36	MNA145A100KK	Capacitor Array
Z37	MNA145A100KK	Capacitor Array
Z38	MNA145A100KK	Capacitor Array
Z39	MNA145A100KK	Capacitor Array
<b>COILS</b>		
L1	NLC322522T	Coil
L2	ERJ6GEY0R00	0-ohm Jumper
L3	BLM21A121SPT	Inductor Coil
<b>TRANSISTORS</b>		
Q1	2SA1037K	Transistor
Q2	DTC143XKT146	Transistor
Q3	IMH9	Transistor
Q4	IMH9	Transistor
Q5	IMH9	Transistor
Q6	IMH10	Transistor
Q7	IMH10	Transistor
<b>ICS</b>		
IC1	MN101CP10ABL	IC (CPU)
IC2	M51953BFP	IC (Reset)
IC3	NM93C46TLZEM	IC (EEPROM)
IC4	LC82102-04	IC (Shading Correction)
IC5	M64291FP	IC (AGC)
IC6	LC22052B-PA5	IC (Gate Array)
IC7	MSM514800C70	IC (4M-bit DRAM)
IC8	SN74HC02NS	IC
IC9	TC7W74F	IC
<b>OTHERS</b>		
CN1	B10B-EH	Connector 10P
CN2	B3B-PH-K-S	Connector 3P
CN3	B7B-PH-K-S	Connector 7P
CN4	B16B-PHDSS	Connector 16P
CN5	B9B-PH-K-S	Connector 9P
CN6	175487-8	Connector 8P
CN7	B15B-PH	Connector 15P
CN8	175487-8	Connector 8P
CN9	DHBRA80R131N	Connector 80P
X1	CSA40.0MXZ04	Crystal Oscillator

PANEL Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R200	ERDS2TJ271	C 270, J, 1/4W
R201	ERDS2TJ271	C 270, J, 1/4W
R202	ERDS2TJ271	C 270, J, 1/4W
R203	ERDS2TJ271	C 270, J, 1/4W
R204	ERDS2TJ271	C 270, J, 1/4W
R205	ERDS2TJ271	C 270, J, 1/4W
R206	ERDS2TJ271	C 270, J, 1/4W
R207	ERDS2TJ221	C 220, J, 1/4W
<b>CAPACITOR</b>		
C200	RPE132F104	Capacitor
<b>DIODE</b>		
D200	LN310GP	LED (Green)
<b>IC</b>		
IC200	LA-401MD	7-segment LED
<b>OTHERS</b>		
	LH-5S-1.5	LED Spacer

Ref No.	Parts No.	Description
CN200	S16B-PHDSS	Connector 16P
SW200	EVQ-21405R	Switch
SW201	EVQ-21405R	Switch
SW202	EVQ-21405R	Switch
SW203	EVQ-21405R	Switch
SW204	EVQ-21405R	Switch

HOME SENSOR Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R300	ERDS2TJ151	C 150, J, 1/4W
R301	ERDS2TJ563	C 56k, J, 1/4W
R302	ERDS2TJ473	C 47k, J, 1/4W
R303	ERDS2TJ472	C 4.7k, J, 1/4W
<b>CAPACITORS</b>		
C300	ECEA0JKS470	E 47, 6.3V
C301	RPE132F104	Capacitor
<b>TRANSISTOR</b>		
Q300	2SC1740STPR	Transistor
<b>IC</b>		
IC300	0N2173-R	Photo Sensor
<b>OTHER</b>		
CN300	175489-4	Connector 4P

POWER Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R400	ERDS1TJ105	C 1000k, J, 1/2W <span>△</span>
R401	ERD25TJ224	C 220k, J, 1/4W
R402	ERD25TJ224	C 220k, J, 1/4W
R403	ERG1SJ104P	M 100k, J, 1W
R404	ERG1SJ104P	M 100k, J, 1W
R405	ERG2SJ100P	M 10, J, 2W
R406	ERDS2TJ103	C 10k, J, 1/4W
R407	MPC710.22K	Resistor
R408	ERDS2TJ101	C 100, J, 1/4W
R409	ERDS1TJ330	C 33, J, 1/2W
R410	ERDS2TJ472	C 4.7k, J, 1/4W
R411	ERDS2TJ822	C 8.2k, J, 1/4W
R412	ERDS2TJ683	C 68k, J, 1/4W
R413	ERDS2TJ102	C 1k, J, 1/4W
R414	ERDS2TJ102	C 1k, J, 1/4W
R416	ERDS2TJ105	C 1000k, J, 1/4W
R417	ERDS2TJ472	C 4.7k, J, 1/4W
R418	ERDS2TJ473	C 47k, J, 1/4W
R419	ERDS2TJ823	C 82k, J, 1/4W
R420	ERDS2TJ154	C 150k, J, 1/4W
R422	ERD25TJ224	C 220k, J, 1/4W
R423	ERD25TJ224	C 220k, J, 1/4W
R430	ERG2SJ100P	M 10, J, 2W
R432	ERDS2TJ102	C 1k, J, 1/4W
R433	ERDS2TJ102	C 1k, J, 1/4W
R434	ERDS2TJ561	C 560, J, 1/4W
R435	ERDS2TJ822	C 8.2k, J, 1/4W
R436	ERDS2TJ102	C 1k, J, 1/4W
R437	ERDS2TJ472	C 4.7k, J, 1/4W
R439	ERDS2TJ104	C 100k, J, 1/4W
R440	491007T52	Protector
R441	ERX12SJR33V	M 0.33, J, 1/2W
R443	EROS2TKF3002	M 30k, F, 1/4W
R444	EROS2TKF1002	M 10k, F, 1/4W
R450	ERDS2TJ101	C 100, J, 1/4W
R464	ERDS2TJ102	C 1k, J, 1/4W
<b>CAPACITORS</b>		
C400	ECQU2A104MLA	Capacitor M, <span>△</span>
C401	ECKATS222ME	Capacitor M, <span>△</span>
C402	ECKATS222ME	Capacitor M, <span>△</span>
C403	ECQU2A104MLA	Capacitor M, <span>△</span>
C404	ECEC2EP471DB	E 470, M, 250V <span>△</span>
C405	ECEC2EP471DB	E 470, M, 250V <span>△</span>
C406	ECKD3A101KB	C 100p, K, 1kV
C407	ECKATS472ME	Capacitor M, <span>△</span>

## POWER Board (continued)

Ref No.	Parts No.	Description	
C408	50YXF22MTA	E 22, M, 50V	
C409	ECFF1H104ZF5	C 0.1, Z, 50V	
C410	ECCF1H471J	C 470, J, 50V	
C411	ECQB1H102JF3	P 1000p, J, 50V	
C412	ECQB1H102JF3	P 1000p, J, 50V	
C413	50YXF4R7MTA	E 4.7, M, 50V	
C414	ECFF1H104ZF5	C 0.1, Z, 50V	
C415	ECFF1H104ZF5	C 0.1, Z, 50V	
C417	ECFF1H104ZF5	C 0.1, Z, 50V	
C430	ECKD3A101KB	C 100p, K, 1kV	
C431	35YXF2200MKC	E 2200, M, 35V	
C432	ECQV1H104JL3	P 0.1, J, 50V	
C433	35YXF100M	E 100, M, 35V	
C434	ECCF1H271J	C 270, J, 50V	
C435	10YXF1000MT8	E 1000, M, 10V	
C438	ECFF1H104ZF5	C 0.1, Z, 50V	
C440	35YXA220MT8	E 220, M, 35V	
<b>COILS</b>			
L401	ELF15N013A	Line Filter Coil	△
L402	ELF15N017A	Line Filter Coil	△
L403	HK10S080-121	Choke Coil	
L404	RCH110-471K	Choke Coil	
L410	SS10H1	Coil for KX-BP535A/G/U/ BP635A/G/U/BP735A/G/U	△
<b>TRANSFORMER</b>			
T400	SRW333ED	Switching Transformer	△
<b>DIODES</b>			
D400	470NS10D-K0	Varistor for KX-BP535A/G/U/ BP635A/G/U/BP735A/G/U	△
D400	240NS100-K0	Varistor for KX-BP535/C/T/ BP635/C/T/BP735/C/T	△
D401	470NS10D-K0	Varistor for KX-BP535A/G/U/ BP635A/G/U/BP735A/G/U	△
D401	240NS100-K0	Varistor for KX-BP535/C/T/ BP635/C/T/BP735/C/T	△
D411	D3SBA60-4101	Diode	△
D412	ERA22-10AVRB	Diode	
D413	ERA91-02	Diode	
D414	ERA91-02	Diode	
D415	RD18ESAB	Zener Diode	
D416	RD27ESAB4	Zener Diode	
D417	MA165	Diode	
D418	MA165	Diode	
D430	YG902C3R	Diode	
D431	MA165	Diode	
D432	ERA83004AVRB	Diode	
D433	MA165	Diode	
D434	MA165	Diode	
D435	RD5.1ESAB2	Zener Diode	
D436	MA165	Diode	
D437	RD27ESAB4	Zener Diode	
<b>TRANSISTORS</b>			
Q400	2SK2649-01R	Transistor	△
Q401	DTC143XSATP	Transistor	
Q403	2SA933STPR	Transistor	
Q404	DTC143XSATP	Transistor	
Q405	DTA143XSATP	Transistor	
Q406	2SA933STPR	Transistor	
Q407	DTA143XSATP	Transistor	
Q408	DTC115ESATP	Transistor	
Q411	2SD1994A-S	Transistor	
Q412	2SA933STPR	Transistor	
<b>ICs</b>			
IC400	FA13844P	IC	
IC401	PC123FY2	IC (Photo Coupler)	△
IC402	PC123FY2	IC (Photo Coupler)	△
IC405	NJM431L-T3	IC	
IC406	NJM2360AD	IC	
<b>OTHERS</b>			
	AB3X2X6W	Amorphous Bead Core	
	FA35-9036	Insulate Sheet	
	PAUX37802	Ground Lug	
	PBMDA0578Z	Plate	
	PBMYA0011Z	Heat Sink	

Ref No.	Parts No.	Description	
	TC-30A	Insulate Sheet	
	TJC6320	Holder	
	XTN3+8JFX	Screw	
CN400	B2P3-VH	Connector 2P	△
CN401	B10B-EH-F1	Connector 10P	
CN402	175487-7	Connector 7P	
CN403	B4B-EH	Connector 4P	
F400	PB215004	Fuse for KX-BP535A/G/U/ BP635A/G/U/BP735A/G/U	△
F400	PB237004	Fuse for KX-BP535/C/T/ BP635/C/T/BP735/C/T	△
F401	PB218004	Fuse for KX-BP535A/G/U/ BP635A/G/U/BP735A/G/U	△
F401	PB237004	Fuse for KX-BP535/C/T/ BP635/C/T/BP735/C/T	△
RL400	RPE-24	Relay	
TH400	N100L12325JF	Power Thermistor	△
TH401	RUE300	Switch	△
VR400	EVNDXAA03B13	Variable Resistor (1kΩ)	

## LAMP DRIVER Board

Ref No.	Parts No.	Description	
<b>RESISTORS</b>			
R500	491002T52	Protector	
R501	ERDS2TJ103	C 10k, J, 1/4W	
R502	ERDS2TJ103	C 10k, J, 1/4W	
R503	ERDS2TJ102	C 1k, J, 1/4W	
R504	ERDS2TJ472	C 4.7k, J, 1/4W	
R505	WF5N34G100J	Resistor	
R506	ERG2SJ152	M 1.5k, J, 2W	
R507	ERG2SJ152	M 1.5k, J, 2W	
R550	491002T52	Protector	
R551	ERX2SJR75H	M 0.75, J, 2W	
R552	ERX2SJR75H	M 0.75, J, 2W	
R553	ERDS2TJ183	C 18k, J, 1/4W	
R554	ERDS2TJ393	C 39k, J, 1/4W	
R555	ERDS2TJ102	C 1k, J, 1/4W	
R556	ERDS2TJ102	C 1k, J, 1/4W	
R557	ERDS2TJ102	C 1k, J, 1/4W	
R558	ERDS2TJ102	C 1k, J, 1/4W	
<b>CAPACITORS</b>			
C501	ECQF4154J	Capacitor	
C502	ECQV1H474	P 0.15, J, 400V	
C503	ECQB1H472	P 4700p, J, 50V	
C504	ECQB1H472	P 4700p, J, 50V	
C505	35YXA220MT8	E 220, M, 35V	
C551	ECA1HM220	E 22, M, 50V	
C552	ECA1HM220	E 22, M, 50V	
C553	ECQB1H472	P 4700p, J, 50V	
<b>COIL</b>			
L500	SK21BS060400	Coil	
<b>TRANSFORMER</b>			
T500	PBLT6H1ZA	Fluorescent Lamp Transformer	△
<b>DIODE</b>			
D503	RM26V1	Diode	
<b>TRANSISTORS</b>			
Q501	2SA673AC	Transistor	
Q502	2SB1389	Transistor	
Q503	2SD1274C	Transistor	
Q504	2SD1274C	Transistor	
Q551	DTA143XSATP	Transistor with Resistor	
Q552	DTC143XSATP	Transistor with Resistor	
<b>IC</b>			
IC500	MTD2003	IC	
<b>OTHERS</b>			
CN500	PAUX37802	Ground Lug	
CN501	B16B-PHDSS	Connector 16P	
CN502	B5P-VH-B	Connector 5P	
CN503	175487-3	Connector 3P	
	B4B-EH	Connector 4P	

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MOTOR DRIVER Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R600	491002T52	Protector
R601	491002T52	Protector
R602	ERDS2TJ561	C 560, J, 1/4W
R603	ERDS2TJ561	C 560, J, 1/4W
R604	ERDS2TJ561	C 560, J, 1/4W
R605	ERDS2TJ561	C 560, J, 1/4W
R606	ERDS2TJ561	C 560, J, 1/4W
R607	ERDS2TJ561	C 560, J, 1/4W
R608	ERDS2TJ561	C 560, J, 1/4W
R609	ERDS2TJ561	C 560, J, 1/4W
<b>CAPACITORS</b>		
C600	RPE132F104	Capacitor
C601	RPE132F104	Capacitor
C602	RPE132F104	Capacitor
C603	RPE132F104	Capacitor
C604	ECA1HM220	E 22, 50V
C605	RPE132F104	Capacitor
C606	ECA1HM220	E 22, 50V
C607	RPE132F104	Capacitor
C608	RPE132F104	Capacitor
C609	RPE132F104	Capacitor
<b>DIODES</b>		
D600	HZ33-2	Zener Diode
D601	HZ33-2	Zener Diode
D602	HZ33-2	Zener Diode
D603	HZ33-2	Zener Diode
<b>ICs</b>		
IC600	MP4303	IC
IC601	MP4303	IC
<b>OTHERS</b>		
CN600	B3B-EH	Connector 3P
CN601	175487-5	Connector 5P
CN602	B4B-PH-K-S	Connector 4P
CN603	B3B-PH-K-S	Connector 3P
CN604	B16B-PHDSS	Connector 16P
CN605	B7B-PH-K-S	Connector 7P
CN606	B6B-PH-K-S	Connector 6P
CN607	B4B-EH	Connector 4P

MAIN Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R700	ERDS2TJ470	C 47, J, 1/4W
R701	ERDS2TJ470	C 47, J, 1/4W
R702	ERDS2TJ470	C 47, J, 1/4W
R703	ERDS2TJ101	C 100, J, 1/4W
R704	ERDS2TJ101	C 100, J, 1/4W
R705	ERDS2TJ222	C 2.2k, J, 1/4W
R706	ERDS2TJ471	C 470, J, 1/4W
<b>CAPACITORS</b>		
C700	ECA1HM220	E 22, 50V
C701	RPE132F104	Capacitor
<b>TRANSISTOR</b>		
Q700	2SC1740STPR	Transistor
<b>IC</b>		
IC700	UPD3753	IC (CCD)
<b>OTHER</b>		
CN700	175487-8	Connector 8P

TOP SENSOR Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R800	ERDS2TJ331	C 330, J, 1/4W
R801	ERDS2TJ103	C 10k, J, 1/4W
R802	ERDS2TJ103	C 10k, J, 1/4W
<b>CAPACITORS</b>		
C800	ECEA0JKS470	E 47, 6.3V

Ref No.	Parts No.	Description
C801	RPE132F104	Capacitor
<b>TRANSISTOR</b>		
Q800	2SC1740STPR	Transistor
<b>IC</b>		
IC800	TLP832	Photointerrupter
<b>OTHER</b>		
CN800	S5B-PH	Connector 5P

HOPPER SENSOR Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R820	ERDS2TJ331	C 330, J, 1/4W
R821	ERDS2TJ103	C 10k, J, 1/4W
R822	ERDS2TJ103	C 10k, J, 1/4W
<b>CAPACITORS</b>		
C820	ECEA0JKS470	E 47, 6.3V
C821	RPE132F104	Capacitor
<b>TRANSISTOR</b>		
Q820	2SC1740STPR	Transistor
<b>IC</b>		
IC820	CNA1006N	Photo Interrupter
<b>OTHER</b>		
CN820	175489-5	Connector 5P

DOOR SENSOR Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R840	ERDS2TJ331	C 330, J, 1/4W
R841	ERDS2TJ103	C 10k, J, 1/4W
R842	ERDS2TJ103	C 10k, J, 1/4W
<b>CAPACITORS</b>		
C840	ECEA0JKS470	E 47, 6.3V
C841	RPE132F104	Capacitor
<b>TRANSISTOR</b>		
Q840	2SC1740STPR	Transistor
<b>IC</b>		
IC840	TLP832	Photointerrupter
<b>OTHER</b>		
CN840	B3B-PH-K-S	Connector 3P

FILM END SENSOR Board

Ref No.	Parts No.	Description
<b>RESISTORS</b>		
R860	ERDS2TJ331	C 330, J, 1/4W
R861	ERDS2TJ103	C 10k, J, 1/4W
R862	ERDS2TJ103	C 10k, J, 1/4W
<b>CAPACITORS</b>		
C860	ECEA0JKS470	E 47, 6.3V
C861	RPE132F104	Capacitor
<b>TRANSISTOR</b>		
Q860	2SC1740STPR	Transistor
<b>IC</b>		
IC860	TLP832	Photointerrupter
<b>OTHER</b>		
CN860	B3B-EH	Connector 3P

## PAPER SENSOR Board

Ref No.	Parts No.	Description			
<b>RESISTORS</b>					
R880	ERDS2TJ331	C	330,	J,	1/4W
R881	ERDS2TJ103	C	10k,	J,	1/4W
R882	ERDS2TJ103	C	10k,	J,	1/4W
<b>CAPACITORS</b>					
C880	ECEA0JKS470	E	47,		6.3V
C881	RPE132F104	Capacitor			
<b>TRANSISTOR</b>					
Q880	2SC1740STPR	Transistor			
<b>IC</b>					
IC880	TLP832	Photointerrupter			
<b>OTHER</b>					
CN880	B4B-PH-K-S	Connector 4P			